SK – Pearls
of
PATHOLOGY

For FCPS – I

All Golden files of Pathology
past papers from Golden 1 – 15

Important notes of Pathology &
High Yield points from Goljan Pathoma
& BRS Pathology

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DEDICATION

This book is dedicated to my parents,
Zaheer Akhtar and Aneela Zaheer
and to my grandparents,
Naseer Akhtar Shafai (late) and Naveed Akhtar
Thank you for your unconditional love, endless support and encouragement.

Dr. Faiza Zaheer

Foreword

This gives me great pleasure to write this foreword for the book of **Dr. Faiza Zaheer.** She has recently passed FCPS Part – 1 in pathology and currently working as post graduate resident.

I found her highly hardworking, knowledgeable, disciplined and dedicated young doctor professionally mature and has deep insight of his academic field.

This book is basically written for preparation of FCPS (Part-1) pathology students. It includes all basic knowledge and past papers. It is written in a very simple language and systemic way. It covers all important aspects of the subject of Pathology. It contains solid knowledge of every disease. FCPS students will find it very helpful in their preparation for exams with saving a lot of time in gathering the required knowledge. Reading this book will enhance their capabilities to attempt their papers more easily and rationally.

I congratulate **Dr. Faiza Zaheer** for writing such an excellent helping book which was really a need of the day and the only book available in market for FCPS part-1 pathology students.

I say good luck to all the readers of the book in their forthcoming exams and strongly believe this book will help them a lot to achieve the mandatory milestone of their professional career (FCPS part-1).

Dr. Salahuddin Kamal (Dr. SK)
Founder of SK Series

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Table of Contents

#	SK – Pathology	Page
	High yield Pathology	
	Secrete of Pathology	
	BRS review test	
	Golden files	
	2014	
	2016	
	2017	
	2018	
	2019	
	2020	
	2021	
	2022	

200 Important Points with Definitions to Remember in General Pathology

1. Hyperplasia is an increase in the number of cells in an organ or tissue, usually resulting in increased volume of the organ or tissue.
2. Hypertrophy refers to an increase in the size of cells, resulting in an increase in the size of the organ.
3. Atrophy is the shrinkage in the size of the cell by loss of cell substance.
4. Metaplasia is defined as a reversible change in which one adult cell type (epithelial or mesenchymal) is replaced by another adult cell type.
5. Cell swelling is the earliest sign of a reversible cell injury.
6. Free radical is a chemical species that have a single unpaired electron in an outer orbit.
7. Necrosis is a spectrum of morphological changes that follow cell death in a living tissue largely resulting from the progressive degradative action of enzymes on the lethally injured cell.
8. Necrosis has six major type; coagulative, Caseous, Liquefactive, fibrinoid, gangrenous and Fat.
9. Apoptosis (Greek falling off) is defined as a pathway of programmed cell death that is aimed at a highly regulated intracellular programme in which cells destined to death by activated enzyme that degrade the cell's DNA and nuclear and cytoplasmic proteins.
10. Morphologically an apoptotic cell shows: a) cell shrinkage, b) chromatin condensation c) formation of cytoplasmic blebs and apoptotic bodies, d) phagocytosis by macrophages.
11. Apoptosis has two phases a) Initiation phase extrinsic and intrinsic pathways b) Execution phase c) phagocytosis of dead cell
12. Genes promoting apoptosis are: bax, bak, bim
13. Genes inhibiting apoptosis are bcl 2 family.
14. Initiator caspase are 8 & 9, while executioner caspases are mainly 3 & 6.
15. Dystrophic calcification is always seen in damaged tissues while metastatic calcification may occur in normal tissues whenever there is hyperplasia.
16. Inflammation is a complex reaction to injurious agents such as microbes and damaged, usually necrotic cells that consists of vascular responses, migration and activation of leukocytes, and systemic reactions.
17. Inflammatory response consists of two main components: vascular & cellular, and divided into two main patterns: Acute and Chronic.
18. Vasodilatation is one of the earliest manifestations of acute inflammation, if follows a transient vasoconstriction of arterioles lasting few seconds.
19. Increased vascular permeability leading to the escape of a protein-rich fluid (exudate) into the extravascular tissue in the HALL MARK of acute inflammation.
20. Formation of endothelial gaps in venules is the most common cause of vascular leakage.
21. Leukocytes Adhesion molecular families have a major classis: a) Selectins (E, L & P types), b) Integrins, c) Immunoglobulin family of adhesion molecules and d) Mucin like glycoproteins.
22. Selectins mainly involved in rolling of leukocytes, PECAM in transmigration and immunoglobulin family in adhesions.
23. Chemotaxis is defined as uni directional migration of leukocytes towards the site of injury under chemical gradient action.
24. Most important chemotactic agents are C5a, LTB4 and bacterial products.
25. Major opsonins are: C3b & Fc fragment of IgG proteins
26. H202-MPO-Halide systein is the most efficient bactericidal system in neutrophils.
27. Chediak-Higashi Syndrome is an autosomal recessive condition characterized by failure of fusion of phagosome with lysosome.
28. Chronic granulomatous disease of childhood results from inherited defects in the components of NAPDH oxidase which generates superoxide, leading to body infections.
29. Vasoactive amines are histamine and serotonin which are the main players of early inflammation.
30. Plasma Proteins are: Complement system proteins, clotting system and fibrinolytic system.
31. Prostaglandins are vasodilators.

32. MAC (C5B6789) is the membrane attack complex, which finally kills the bacteria.
33. Activated Hageman factor initiates FOUR systems involved in inflammatory responses Kinin, Clotting, fibrinolytic and complement system
34. SRS-A (slow releasing substance of anaphylaxis) constitutes LTC4, LTD4 & LTE4 promote vasoconstriction, bronchospasm & increased vascular permeability.
35. Lipoxins are bioactive products generated from transcellular biosynthetic mechanisms involving neutrophils and platelets.
36. IL-1 & TNF are two of the MAJOR cytokines that mediate inflammation.
37. Major chemokines include: IL-8, MCP-1, eotaxin, MIP-1, Lymphotactin and RANTES.
38. Nitric oxide plays major role in production of vasodilation by relaxing vascular smooth muscle in ischemic conditions.
39. The major mediators of pain are Bradykinin & Prostaglandins
40. Potent vasodilators are : Vasoactive Amines, Prostaglandins & NO.
41. Acute inflammation is defined as a rapid response to an injurious agent that serves to deliver mediators of host defense – leukocytes and plasma proteins to the site of injury.
42. Chronic inflammation is defined as an inflammation of prolonged duration, in which active inflammation, tissue destruction and attempts at repair are proceeding simultaneously.
43. Neutrophils are the main cells of acute inflammation (exudates) while Mononuclear cells (with one nucleus are the main cells of chronic inflammation. Mononuclear cells include Lymphocytes, Monocytes, Macrophages and Plasma cells.
44. Macrophages are the prima donna (main working cell) of chronic inflammation, while lymphocytes are present in increased number.
45. Granuloma is a focus of chronic inflammation, consisting of microscopic aggregation of macrophages that are transformed into epithelium like cells surrounded by a collar of mononuclear leukocytes. Don't confuse it with Granulation tissue which has capillaries, fibroblasts, and a variable amount of inflammatory cells.
46. Classical tuberculous granulomas is composed of epithelioid cells, Langhan's multinucleated giant cells, caseation necrosis and collar of lymphocytes. There are two types of Granulomas: Immune & foreign body.
47. There are 3 types of cells in the body: Continously dividing labile cells, Quiscent or stable cells and Permanent Non-dividing cells.
48. Stem cells are cells characterized by their prolonged self renewal capacity and by the asymmetric replication. They are of two types: embryonic & adult stem cells.
49. VEGF & fibroblast Growth factor are mainly involved in angiogenesis.
50. TGF-B is a growth inhibitor for most epithelial cells and leukocytes, potent fibrogenic agent and a strong anti-inflammatory effect.
51. Extracellualr matrix is formed of these groups of molecules: a) fibronectin b) adhesive glycoproteins and c) proteoglycans & hyaluronic acid.
52. Collagens is the most common protein in the animal world, with 27 types discovered so far. Types I, II, III, V & X) are fibrillar and most common while type IV is non fibrillar.
53. Healing by 2nd intention differs from 1st intention in three ways; a) inflammatory reaction is more intense, b) Much more granulation tissue forms and c) wound contraction phenomenon.
54. Accumulation of excessive amounts of collagen may give rise to a hypertrophic scar while if scar tissue grows beyond the boundaries of the original wound and does not regress, it is called keloid.
55. Edema is defined as accumulation of fluid in the interstitial tissue spaces and body cavities.
56. Local increased volume of blood in a particular tissue leads to Hyperemia and congestion. Hyperemia is an active process, resulting from augmented tissue inflow because of arteriolar dilation while Congestion is a passive process resulting from impaired outflow from tissue.
57. Heart failure cells are hemosiderin laden macrophages seen in chronic pulmonary congestion.
58. Petechiae are minute 1 to 2 mm hemorrhages into skin, mucous membranes or serosa surfaces, while >3 mm hemorrhages are called Purpura and larger > 1 to 2 cm subcutaneous hematomas are called Ecchymoses.
59. Virchow's triad include: a) Endothelial injury b) Stasis or turbulent blood flow & c) blood hypercoagulability.

60. Of the inherited causes of hypercoagulability, mutation in the factor V gene and prothrombin gene are the most common.
61. Lines of Zahn are laminated lines produced by alternating pale layers of platelets admixed with some fibrin and darker layers containing more red cells.
62. Fate of thrombus include: propagation embolization, dissolution, organization and recanalization.
63. Embolus is a detached intravascular solid, liquid or gaseous mass that is carried by the blood to a site distant from its point of origin. The phenomenon is called embolism.
64. Infarct is an area of ischemic necrosis caused by occlusion of either the arterial supply or the venous drainage in a particular tissue.
65. The most dominant histologic characteristic of infarction is ischemic coagulative necrosis.
66. Shock is the systemic hypoperfusion caused by reduction either in cardiac output or in the effective circulating blood volume, and resulting in hypotension followed by impaired tissue perfusion and cellular hypoxia.
67. Major types of shock include: cardiogenic, hypovolemic, septic, neurogenic and anaphylactic.
68. Mutation is defined as a permanent change in the DNA.
69. Marfan's syndrome is a disorder of the connective tissue of the body, characterized by changes in the skeleton, eyes and cvs. Mainly cause by defects in an extracellular glycoprotein Firbillin-1.
70. Ehlers-Danlos Syndrome comprise a clinically and genetically heterogenous groups of disorders that result from some defect in the syntesis or structure of fibrillar collagen.
71. Amyloid is a pathologic proteinaceous substance deposited between cells in various tissues and organs of the body in a wide variety of clinical settings.
72. Neoplasm is an abnormal mass, the growth of which exceeds and in uncoordinated with that of the normal tissue and persists in the same excessive manner after cessation of the stimuli which evoked the change.
73. Tumor has two basic components: Parenchyma & stroma, while tumors are of two types: Benign and Malignant.
74. Benign tumors are well differentiated, grow slowly and don't show invasion and metastases, while Malignant tumors range from well to undifferentiated, grow fast and show invasion and metastasis.
75. Single most important feature to differentiate benign from malignant tumor is Metastasis.
76. Carcinomas mostly use lymphatic routes and sarcomas mostly use hematogenous routes of spread.
77. Four types of genes are normally working in human body: a) proto-oncogens b) antioncogenes, c) apoptotic genes and d) DNA repair genes
78. Proto-oncogenes are changed to oncogenes by three processes: mutation, translocation and amplification.
79. Major oncogenes are; RAS, ERB-B1, RET, KIT, ABL, C-MYC & N-MYC.
80. Major antioncogenes are: RB, TP53, W.-1, NF-1, BRCA-1, APC.
81. Oncogenic viruses include; Human Papilloma virus, Hepatitis B virus, Epstein Barr virus, Kaposi Sarcoma Herpes viruses & Human T-Cell leukemia virus (The only oncogenic RNA virus).
82. Chemical carcinogenesis is a multistep process, divided into initiation and promotion phases.
83. Major chemical carcinogens associated as include: Asbestos with Mesothelioma, Aniline dyes with TCC, Nitrates-Gastric carcinoma, Aflatoxin with HCC, Vinyl chloride with Angiosarcoma Liver.
84. Radiation induced malignancies include leukemias and papillary carcinoma thyroid.
85. Major paraneoplastic synbdromes include, Cushing syndrome, ADH secretion by small cell carcinoma lung, Hypercalcemia by Squamous cell carcinoma lung, hypoglycemia by Fibrosarcoma and HCC, Polycythemia by RCC and hypertrophia osteoarthropathy by CA lung.
86. Major tumor markers included: HCG for Choriocarcinoma, calcitonin for medullary carcinoma thyroid, alpha fetoprotein-HCC and Non-seminomatous germ cell tumor testis, CEA-CA colon, PAP for CA prostate, CA-125 for Ovarian CA, Ca 19-9 for CA Colon and pancreas, CA 15-3 for CA breast.
87. Major immunomarkers for epithelial tumors are cytokeratin, for mesenchymal tumor – vimentin, for leukocyte origin tumor – leukocyte common antigen, S100 for neural origin tumors and for skeletal muscle tumors – desmin.

88. Type I hypersensitivity ("anaphylactic") or "immediate hypersensitivity") is the result of antigen binding to IgE on the surface of mast cells and basophils. These instantly degranulate and release active substances into the surrounding tissue.
89. Type II cytotoxic hypersensitivity, antibodies attach to antigens on the surfaces of a cell and then something injures or destroys the cell.
90. In type III immune-complex hypersensitivity reaction, "Soluble antigens" precipitate with antibodies, usually this happens 2-4 hours after exposure. This sort of tissue injury is mediated by antigen-antibody complexes ("immune complexes").
91. Type IV Hypersensitivity reaction is called "delayed hypersensitivity". It is mediated by sensitized CD4+T lymphocytes which process antigens in association with class II HLA molecules and release lymphokines.
92. Immune reactions are divided into two broad categories: A) Humoral immunity-B-cell lymphocyte mediated via production of antibody and Often develops as a response to soluble antigens, and B) Cellular immunity-T-Cell lymphocyte mediated. CD4+helper lymphocytes: help B cells make antibody and also help to generate cytotoxic T cells.
93. Major histocompatibility complex is present on all nucleated cells.
94. The HLA system is a key factor in most Transplant rejection reactions. Reactions are mediated by either T lymphocytes or by antibody.
95. Toll like receptors are membrane proteins that recognize a variety of microbe derived molecules and stimulate innate immune responses against the microbes.
96. CD4 molecule is a high affinity receptor for HIV
97. Major autoimmune disease includes Hashimoto's thyroiditis, Rheumatoid Arthritis, Sjogren's syndrome, ankylosing spondylitis.
98. Gamma interferon is one of the cytokines to activate macrophages and also play major Role in Granuloma formation.
99. Cytokines are mediators released from one cell and modulate the actions of another cell.
100. Squamous cell carcinoma is characterized by sheets, groups and clusters of pleomorphic malignant epithelial cells with high N/C ratio, hyperchromatic nuclei and pale cytoplasm. Keratin epithelial pearls, intercellular bridges and individual cell keratinization are seen.
101. Adenocarcinoma is characterized by back to back closely packed glands lined by pleomorphic malignant epithelial cells with high N/C ratio, hyperchromatic nuclei and eosinophilic cytoplasm. Wall sharing is often noted.
102. Two types of vaccines include: Live vaccines; Measles, Mumps, Rubella, Varicella, Polio etc and Killed vaccines: Rabies, Polio, Hepatitis A.
103. Protooncogenes are converted into oncogenes.
104. P53 works by DNA repair and promoting apoptosis.
105. RB gene activates and Works in hypophosphorylated form.
106. RAS gene protooncogene protein is GTP bound and Works with GAP in cooridination with GTPase.
107. Gliomas and BCC are highly malignant but dont usually metastasize.
108. AFB is acid fase bacillus (Mycobacterium tuberculosis) and called so because it resists decolourization by Concentrated Acids.
109. Tigered lipid effect is seen in Herat.
110. Major complement proteins include:
    Opsonization by C3b
    Chemotaxis by C5a
    Anaphylatoxin C3a, C4a, C5a
    Membrane breakdown and killing C5b,6,7,8,9 MAC complex
    Enhancement of antibody production C3b
111. FNAC and biopsy are key investigations to early diagnose a tumor.
112. Active Immunity is the resistance induced after contact with foreign antigens eg microorganisms, immunization with live or killed infectious agents, exposure to microbial products (toxins, toxoids) Passive immunity is resistance based on antibodies preformed in another host eg administration of antibody against tetanus, botulism, diphtheria, rabies etc.

113. Sudden death is majorly linked with embolism.
114. 24 to 48 hours post-acute inflammation, monocytes start accumulating.
115. Ubiquitin proteosome pathway & autophagic vacuoles are mainly involved in atrophy.
116. Reserve stem cells are main players in metaplasia.
117. Mechanical and trophic factors are involved in hypertophy.
118. Eosinophils are players in allergic infections.
119. Sequence of events in acute inflammation is:
Transient asoconstriction, vasodilation stasis, margination, rolling, adhesion, diapedesis, chemotaxis and phagocytosis.
120. Macrophages seen as a part of reticuloendothelial system include:
Osteoclasts – bone, microglia – brain, kupffer cells – liver, alveolar macrophages – lung. Sinus histiocytes – lymph nodes.
120. Tuberculosis is the leading cause of granuloma in Pakistan.
121. Major granulomatous causes include: sarcoidosis, leprosy, cat scratch disease, fungal infections.
122. Grading of a tumor is based on differentiation, atypia and mitoses.
123. Staging of a tumor is based on TNM – tumor, nodes, metastasis.
124. Major autosomal dominant disorders include: Skeletal – Marfan; syndrome
Nervous – Huntington disease, neurofibromatosis
Gastrointestinal – familial polyposis coli
Urinary – polycystic kidney disease
Haematopoietic – hereditary spherocytosis
125. Major intracellular accumulations are:
Melanin – melanoma, bile – cholestasis, carbon – anthracosis, copper – Wilson disease
lipofuscin – aging
126. Fatty change is also known as steatosis.
127. Point mutations are often caused by chemicals or malfunction of DNA replication, exchange a single nucleotide for another e.g RAS.
128. Giant cells are cells containing more than one nucleus.
129. Major giant cells are: Langhan giant cells – Tuberculosis, Tuton giant
cells – xanthoma Warthin finkeldey giant cells – measles, Reed Sternberg cells – Hodgkin Lymphoma
Foreign body giant cells – foreign body
130. IgG fixes complement and crosses placenta.
131. IgM is the heaviest antibody.
132. IgE is the allergic reaction player antibody.
133. IgA is found in secretions.
134. ABL gene is seen translocated in CML.
135. Lines of Zahn confirms a thrombus. They are alternate layers of platelets with fibrin and RBCs'
136. Psamomma bodies are lamellated bodies of dystrophic calcification seen in meningioma, papillary carcinoma thyroid and serous ovarian malignant tumors.
137. Nuclear changes in a necrotic cell include: pyknosis, karyolysis, karryorrhexis and loss of nucleus.
138. Macrophages get accumulated in chronic inflammation by continuous recruitment, proliferation and immobilization.
139. Ischemic injury leads to coagulative necrosis.
140. Major sensitive cell components: maintenance of integrity of cell membrane, aerobic respiration, protein synthesis, genetic integrity
141. Liquefactive necrosis: Usually caused by focal bacterial infections, because they can attract polymorphonuclear leukocytes.
142. Coagulative necrosis is characterised by the preservation of cellular and tissue architecture
143. Fat Necrosis: A term for necrosis in fat, caused either by release of pancreatic enzymes from pancreas or gut (enzymic fat necrosis) or by trauma to fat, either by a physical blow or by surgery (traumatic fat necrosis).

144. Caseous necrosis – cheese like: A distinct form of coagulative necrosis seen in mycobacterial infections (e.g., tuberculosis), or in tumor necrosis, in which the coagulated tissue no longer resembles the cells, but is in chunks of unrecognizable debris
145. Gangrene ("gangrenous necrosis") is not a separate kind of necrosis at all, but a term for necrosis that is advanced and visible grossly with super added putrefaction.
146. Fibrinoid necrosis occurs in the wall of blood vessels when endothelium and smooth muscle cells are injured and dying.
147. Unlike necrosis, where the cell dies by swelling and bursting its content in the area, which causes an inflammatory response, apoptosis is a very clean and controlled process where the content of the cell is kept strictly within the cell membrane as it is degraded.
148. The extrinsic pathway of apoptosis is initiated through the stimulation of the transmembrane death receptors, such as the Fas receptors, located on the cell membrane.
149. In contrast, the intrinsic pathway of apoptosis is initiated through the release of signal factors by mitochondria within the cell
150. In male's bronchogenic carcinoma and in females breast carcinoma are at the top.
151. Preneoplastic conditions include: Cirrhosis of liver, Atypical hyperplasia of endometrium, Leukoplakia, Inflammatory bowel disease, Adenomatous colonic polyps
152. Initiator chemicals - Cause irreversible damage to DNA, but at maximum they can cause severe dysplasia. Promoter chemicals itself cannot induce cancer, they propagate or enhance the effects of initiators.
153. Known chemical carcinogens include: A- Asbestos - Lung, mesothelioma. GI tract (esophagus, stomach, large intestine)
    b- Arsenic - Lung, skin, hemangiosarcoma
    c- Beryllium - Lung
    d- Cadmium - prostate
    e. Benzene - Leukemia
154. Ionizing radiation leads to disjunction → random fusion → mutation.
155. Exposure long term of radiations lead to leukemia and thyroid cancers.
156. Initiation, Latent stage, Promotion and Malignant transformation are recognizable stages in carcinogenesis.
157. Mast cells are the main source of histamine and platelets the main source of serotonin.
158. Thromboxane A2 (TXA2), from platelets, aggregates platelets, constricts blood vessels. Great for hemostasis.
159. Prostacyclin (PGI2), from the vessel wall, prevents platelet aggregation, dilates vessels. Great for whenever hemostasis is unnecessary.
160. Suppurative or purulent inflammation is characterized by the production of large amounts of pus or purulent exudate consisting of neutrophils, necrotic cells, and edema fluid.
161. An ulcer is a local defect, or excavation, of the surface of an organ or tissue that is produced by the sloughing (shedding) of inflammatory necrotic tissue
162. Teratoma is a tumor derived from more than one germ cell layer.
163. Seminomas, Melanomas, Hepatomas are malignant tumors.
164. Extent to which the tumor cell resembles its parent cell is differentiation.
165. Ranges of differentiation include: well, moderately, poorly, undifferentiated (anaplasia).
166. A malignant cell shows: high N/C ratio, hyperchromatic nuclei, prominent nucleoli, scanty cytoplasm and pleomorphism.
167. Carcinoma in situ is: Full-thickness dysplasia extending from the basement membrane to the surface of the epithelium.
168. Dysplasia: Atypical proliferation of cells characterized by nuclear enlargement and failure of differentiation which falls short of malignancy
169. The change that occurs in the stroma as tumor invades is called desmoplasia
170. Benign tumors never locally invade and Malignant tumors always invade the surrounding tissues.
171. Carcinoma of the ovary spreads through seeding of body cavities.
172. Commonest places for mets deposits are liver and lungs.
173. Perineural spread is seen by carcinoma of prostate and pancreas (2 P's).

174. Nuclear damage is the hall mark of irreversible cell injury.
175. Scientific study of structural changes and functional consequences of injurious stimuli on cells, tissues and organs is Pathology.
176. Metaplasia is a two edges sword because it can lead to dysplasia and the original function of cells is lost.
177. Metaplasia can lead to dysplasia.
178. Although atrophic cells may have diminished function, they are not dead.
179. Pathologic hyperplasia constitutes a fertile soil in which cancerous proliferation may eventually arise like BPH and endometrial hyperplasia.
180. Dysplasia can regress and does not always lead to cancer.
181. Transudates are fluid accumulations that are essentially salt-water, accumulated because of pressure problems. Exudates are protein-rich fluid accumulations, due to leaky vessels.
182. In disseminated intravascular coagulation, the clotting cascades are activated throughout the body. This is bad, since it tends to shut down organs due to microthrombi, and also causes bleeding due to consumption of clotting factors and activation of plasmin.
183. Some people reserve the word "thrombus" for the ante-mortem kind, and call post-mortem thrombi "clots".
184. Arterial thrombi usually occur over ruptured atherosclerotic plaques, less often at sites of other vascular disease or old surgery.
185. Vegetations are thrombi that occur on cardiac valves. They may be loaded with bacteria ("bacterial endocarditis"), or sterile ("marantic", "verrucous", "bland"; also the thrombi of acute rheumatic fever).
186. Embolus" comes from the Greek for "bottle stopper".
187. Pulmonary embolization is one of the great killers of hospitalized patients, and that ante-mortem diagnosis is notoriously unsatisfactory even today.
188. A paradoxical embolus (* crossed embolus) is one from the systemic veins that passes through a right-to-left intracardiac shunt (i.e., a birth defect), to occlude a systemic artery.
189. Long bone fractures are the main cause of fat embolism.
190. Tumor emboli are bits of cancer that invaded a vein and then broke off. Renal cell carcinoma is famous for this.
191. White infarcts ("anemic infarcts", from "an-", not, and "-eme", blood) are usual when arteries are occluded in solid organs
192. Red infarcts ("hemorrhagic infarcts", sounds like an oxymoron but isn't) result when veins are occluded, or when arteries are occluded in loose tissues (bowel) or with a dual blood supply, or when the organ was already very congested.
193. Monocytes are the largest cells in blood stream.
194. Histiocytes are mature tissue macrophages.
195. Cell membrane damage is the first sign of irreversible cell injury.
196. Lysosomal leakage confirms irreversible cell injury.
197. Choristomas and hematomas are not neoplasms.
198. FGF, TGF, VEGF, EGF are main growth factors.
199. Endothelium gets leaky in acute inflammation due to:
    1) Formation of endothelial gaps in venules
    2) Cytoskeletal reorganization
    3) Increased transcytosis
    4) Direct endothelial injury
    5) Leukocyte dependent injury
    6) Delayed prolonged leakage
    7) Leakage from new blood vessels

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GENERAL PATHOLOGY

Increase in the size (**hypertrophy**).
Increase in the number of cells (**hyperplasia**).
Hyperplasia and **hypertrophy** generally occur together (e.g.., **uterus during pregnancy**).
Permanent tissues (e.g.., cardiac muscle, skeletal muscle, and nerve), however, cannot make new cells and **undergo hypertrophy only.**
Atrophy: Occurs via a decrease in the size and number of cells.
METAPLASIA: A change in stress on an organ leads to a change in cell type (metaplasia). It is reversible. **Barret esophagus** is classic example; Esophagus is normally lined by nonkeratinizing **squamous epithelium** (suited to handle friction of a food bolus). Acid reflux from the stomach causes metaplasia to nonciliated, mucin-producing **columnar cells. Vitamin A** Deficiency can lead to metaplasia.
Dysplasia: Disordered cellular growth, Most often refers to proliferation of precancerous cells. Dysplasia is reversible.
Aplasia: Failure of cell production. e.g. Renal agenesis.
Hypoplasia: Decrease in cell production e.g. Streak ovaries in Turner.
Metastatic calcification: Occur in previously normal tissue. Cause of metastatic calcification is **Hypercalcemia e.g.** Hyperparathyroidism, osteolytic bone tumor, Vitamin – D toxicity, Milk alkali syndrome.
Dystrophic calcification: Occurs in already damaged tissue. Serum calcium is normal. E.g. area of old trauma, Tuberculosis leison, Scarring of heart valves.
Cell injury: Common causes of cellular injury include inflammation, nutritional deficiency or excess, hypoxia, trauma, and genetic mutations**.**
Hypoxia: Decreased oxygen impairs oxidative phosphorylation, resulting in decreased ATP production. Lack of ATP (essential energy source) leads to cellular injury.
Reversible and irreversible cellular injury:
The **hallmark of reversible injury** is cellular **swelling.** Cytosol swelling results in loss of microvilli and membrane blebbing. Swelling of the rough endoplasmic reticulum (RER) results in dissociation of ribosomes and decreased protein synthesis.
Eventually, the damage becomes irreversible. The hallmark of irreversible injur**y is membrane damage.** There is massive calcium influx. Leakage if cytosolic enzymes into serum. Mitochondrial membrane damage. Lysosome membrane damage results in hydrolytic enzymes leaking into the cytosol.
The morphologic hallmark of cell death is loss of the nucleus, which occurs via nuclear condensation (pyknosis), fragmentation (karyorrhexis), and dissolution (karyolysis).
Necrosis: Death of large groups of cells followed by acute inflammation.
Coagulative necrosis Necrotic tissue that remains firm (Fig. l.SA); cell shape and organ structure are preserved by coagulation of proteins, but the nucleus disappears.
Red infarction arises if blood re-enters a loosely organized tissue (e.g.., pulmonary or testicular infarction).
Types of infarcts: Red infarct Occurs in venous occlusion and tissues with multiple blood supplies (eg, liver, lung, intestine, **testes**).
Pale infarct Occurs in solid organs with a single (endarterial) blood supply e.g. **heart, kidney, spleen.**
Liquefactive necrosis Necrotic tissue that becomes liquefied; enzymatic lysis of cells and protein results in liquefaction. e.g. **Brain and abscess.**
Caseous necrosis: Combination of coagulative and liquefactive necrosis.
Fat necrosis Necrotic adipose tissue with chalky-white appearance due to deposition of calcium. Characteristic of trauma to fat (e.g.., breast) and pancreatitis-mediated damage of peripancreatic fat .
Fibrinoid necrosis Necrotic damage to blood vessel wall. Characteristic of malignant hypertension and vasculitis
Apoptosis: Programmed cell death e.g. Endometrial shedding during menstrual cycle. Removal of cells during embryogenesis. T cell-mediated killing of virally infected cell.

Apoptosis is mediated by caspases that activate proteases and endonucleases:
Caspases are activated by multiple pathways.

Intrinsic mitochondrial pathway: Cellular injury →DNA damage or loss of hormonal stimulation → inactivation of Bcl2 → Cytochrome c to leak from the inner mitochondrial matrix into the cytoplasm → Activate caspases.

Extrinsic receptor-ligand pathway:

1)FAS ligand binds FAS death receptor (CD95) on the target cell, activating caspases.

2)Tumor necrosis factor (TNF) binds TNF receptor on the target cell, activating caspases.

Extrinsic pathway activates **Caspases 8.**

Intrinsic pathway activates **caspases 9.**

Free Radicals: Free radicals are chemical species with an unpaired electron in their outer orbit. Partial reduction of02 yields superoxide, hydrogen peroxide and hydroxyl radicals.

Pathologic generation of free radicals arises with:

Ionizing radiation.

Inflammation-NADPH oxidase generates superoxide ions during oxygen-dependent killing by neutrophils.

Metals (e.g.., copper and iron)-Fe2+ generates hydroxyl free radicals (Fenton reaction).

Drugs and chemicals.

Carbon tetrachloride (CCI4): _____Decreased apolipoproteins lead to fatty change in the liver.

Amyloidosis:

Amyloid is a misfolded protein that deposits in the extracellular space, thereby damaging tissues.

Amyloidosis visualized by **Congo stain.** (apple Green birefringence).

Most common organ affected in Primary Amyloidosis is **Kidney.**

Most Common cause of death in Primary amyloidosis is **cardiac failure.**

Amyloidosis best confirmed by **Rectal biopsy.**

Amyloidosis associated with deficiency of factor X.

Dialysis related amyloidosis beta 2 microglobulin.

Beta 2 microglobulin also associated with carpal tunnel syndrome.

AA amyloidosis associated with Chronic inflammation like IBD and RA.

Senile amyloidosis _____ **transthyretin**.

Systemic AL amyloidosis _____ Multiple myeloma.

Alzheimer_____ beta amyloid protein.

Diabetes _____ Amylin.

Amyloidosis is associated with Proximal renal tubular acidosis RTA Type 2.

Inflammation:

Toll-like receptors (TLRs) _____Present on cells of the **innate immune system** e.g.., macrophages and dendritic cells. Activated by pathogen-associated molecular patterns **(PAMPs**) that are commonly shared by microbes. e.g. Flagellin protein and Lipopolysaccharide.

TLRs are also present on cells of **adaptive immunity (**e.g. **B- lymphocytes)**.

PGI 2, PGD2, and PGE2 mediate **vasodilation** and increased **vascular permeability.**

LTC4, LTD4, & LTE4 (slow reacting substances of anaphylaxis) mediate **vasoconstriction**, **bronchospasm**, and increased vascular permeability.

LTB4 attracts and activates **neutrophils.**

C3a and C5a (**anaphylatoxins)-**trigger mast cell degranulation, resulting in histamine-mediated vasodilation and increased vascular permeability.

C5a -chemotactic for neutrophils.

C3b-opsonin for phagocytosis.

MAC-lyses microbes by creating a hole in the cell membrane.

Cardinal signs of inflammation:

RUBOR – Redness.

CALOR – Warmth

Tumor – swelling.

DOLOR – Pain **Bradykinin and PGE2 sensitize sensory nerve endings. (Past PPR BCQ).**

Loss of function.

Neutrophil arrival and function:

Step1: Margination, Cells marginate from centre of flow to the periphery.

Step2: Rolling: It is Mediated by Selectins: L – selectin expressed on neutrophil and P Selectin expressed on Endothelial cells. Selectins bind sialyl Lewis X on leukocytes and Interaction results in rolling of leukocytes along vessel wall.
Step 3: Adhesion Cellular adhesion molecules (**ICAM and VCAM**) are upregulated on **endothelium.**
Integrins are upregulated **on leukocytes.** Interaction between CAMs and integrins results in **firm** adhesion of leukocytes to the vessel wall.
Step 4: Transmigration and Chemotaxis. Neutrophils are attracted by bacterial products, IL-8, C5a, and LTB4.
Step 5: Phagocytosis Consumption of pathogens or necrotic tissue; phagocytosis is enhanced by opsonins **(IgG and C3a)**.
Step 6: Destruction of phagocytosed material: 0 2-dependent killing is the most effective mechanism.
Step 7: Resolution
Macrophages predominate after neutrophils and peak 2-3 days after inflammation begins.
Chronic inflammation:
Stimuli include (1) persistent infection (most common cause); (2) infection with viruses, mycobacteria, parasites, and fungi; (3) autoimmune disease; (4) foreign material; and (5) some cancers.
MHC class II, is expressed by antigen presenting cells (APC).
Helper T cells. T H1 subset secretes IL-2 (T cell growth factor and CD8+ T cell activator) and IFN-y (macrophage activator).
T H2 subset secretes IL-4 (facilitate**s B-cell** class switching to IgG and IgE).
IL-5 (eosinophil chemotaxis and activation, maturation of B cells to plasma cells, and class switching to IgA), and IL-10 (inhibits T H1 phenotype).
Granuloma is a collection of **epithelioid** histiocytes.
Most important cells of chronic inflammation are **macrophages,** and most abundant cells of chronic inflammation are **Lymphocytes.**
Digeorge Syndrome: Developmental failure of the **third and fourth p**haryngeal pouches Due to 22q 11 microdeletion, T-cell deficiency (lack of thymus); hypocalcemia (lack of parathyroid); and abnormalities of heart, great vessels, and face.
Severe combined immunodeficiency (scid):
X-linked.
Defective cell-mediated and humoral immunity.
Etiologies include:
1)Cytokine receptor defects.
2)**Adenosine deaminase (ADA) deficiency-ADA (Past PPR BCQ).**
3)MHC class II deficiency-
Characterized by susceptibility to fungal, viral, bacterial, and protozoal infections, including opportunistic infections and live vaccines.
X-linked agammaglobulinemia:
Complete lack of immunoglobulin due to disordered B-cell maturation
Presents after **6 months** of life with recurrent bacterial, enterovirus (e.g. polio and coxsackievirus), and Giardia Lamblia infections.
Maternal antibodies present during the first 6 months of life are protective.
Common Variable Immunodeficiency (Cvid): Low immunoglobulin due to B-cell or helper T-cell defects. Increased risk for bacterial, enterovirus, and Giardia Lamblia infections, usually in **late childhood. (Past PPR BCQ).**
IgA Deficiency: Low serum and mucosal IgA; **most common immunoglobulin deficiency**. Increased risk for mucosal infection, especially viral; however, most patients are asymptomatic.
Wiskott – Aldrich Syndrome: Characterized by thrombocytopenia, eczema, and recurrent infections (defective humoral and cellular immunity). **past PPR BCQ.** Due to mutation in the WASP gene; X-linked.
Autoimmune disorders:
More common in female. Molecular mimicry lack of self-tolerance. Negative selection.
Systemic Lupus Erythematosus
Type 3 HSR:
Most sensitive test: ANA.

Most specific test: Anti-Smith >Anti-DsDNA.
Anti-Histone antibody is characteristic of **drug-induced SLE**.
Hydralazine, procainamide, and isoniazid are common causes_____ **mnemonic PIH.**
Granulation tissue formation is the i**nitial phase of repair**, Predominant **type III collagen. Myofibroblasts** _____ contract wound**.**
Scar formation in which type III collagen is replaced with type I collagen.
Type III collagen is pliable and present in granulation tissue, embryonic tissue, uterus, and **keloids** and Hypertrophic scar.
Type I collagen has high tensile strength and is present in skin, bone, tendons, and most organs.
Collagenase removes type III collagen and requires zinc as a cofactor.
Healing by Primary intention - Wound edges are brought together (e.g. suturing of a surgical incision); leads to minimal scar formation.
Secondary intention – Edges are not approximated. Granulation tissue fills the defect; myofibroblasts then **contract the wound,** forming a scar.
Delayed wound healing occurs in Infection (most common cause; S aureus is the most common offender) Vitamin C, copper, or zinc deficiency, Other causes include foreign body, ischemia, diabetes, and malnutrition.
Dehiscence is rupture of a wound; most commonly seen after abdominal surgery.
In **Fenton reaction** _____ **Ferrous iron** is converted to **Ferric iron. (Past PPr BCQ)**
$Fe^{+2} + H_2O_2$ ----------> $Fe^{+3} + O_2 + 2H^+$
Note: Lymphatic spread is typical of **Carcinoma. Hematogenous** spread by **Sarcoma.**
Tumor spread (metastasis) by break down of **E-Cadherin. (PAST PPR BCQ).**

Which of the following is the confirmatory test of AIDS?
Western blot✓
ELISA
PCR
DNA test.
Alkaline phosphate level is increased in:
Bone disease
Liver disease
Blood disorders e.g. Polycythaemia Vera
All of these.
Mild transplant rejection biopsy shows which of the following?
Lymphocytes✓
Aneurysms
Antigen antibody complexes
Eosinophils.
Decrease alpha fetoprotein present in:
Down syndrome✓
Neural tube defects
Ebstein
Renal agenesis
Explanation: B-HCG and inhibin increases.
In malignant melanoma. Which of the following cell will present earlier?
T cells
NK cells✓
Monocytes
Macrophages.
All are tumor suppressor gene except:
BRCA1
BRCA2
P53
BCL2✓
Explanation: Tumor suppressor genes are APC, RB, P53, BRCA. **BCL2** is antiapoptotic gene.
Complement components are synthesized mostly in:
Endothelial cells
Mast cells
Hepatocytes✓
B cells.
For transplant HLA best cells are which of the following?
WBCs✓
RBCs
Kidney cells
Hepatic cells.
During Exercise coronary blood flow increases due to:
Sympathetic stimulation
Local metabolites✓
Parasympathetic output
All of above.
Which of following tumor in children is due to gene amplification?
Neuroblastoma✓
Retinoblastoma
Wilms tumor
Nasopharyngeal carcinoma.
A study is performed to analyse characteristic of malignant neoplasm in biopsy specimen. The biopsies were performed on patients who had palpable mass lesions on digital examination. of the following microscopic finding is not an indicator of malignancy?
Pleomorphism
Atypia
Encapsulated✓
increased N/C ratio.
Necrosis
Athlete at rest will have:
Increased stroke volume✓
Decrease stroke volume
Decrease cardiac output
Increase heart rate.
A pathologist done a study on risk factors of congenital urinary defect. Which of the following is associated with increased risk of urothelium origin carcinoma?
Exstrophy of Urinary bladder✓
Duplication of ureter
Medullary sponge kidney
Unilateral renal agenesis.
Metastatic tumors are identified by which of the following way?
Invasion of other structures✓
Pleomorphism
Increase nuclear cytoplasmic ratio
Increase mitosis.
Intestinal metaplasia due to reflux leads to?
Adenocarcinoma✓
Squamous carcinoma
Squamous dysplasia
None of above.
In asthma. one should test antibodies against:
Legionella
Mycoplasma
Aspergillus✓
Chlamydia
Leprosy diagnosis in early stage is by which of the following method?
Nasal or lesion scraping✓
Sputum tests for lepra bacilli
Blood culture
Bone marrow.

In Sjogren syndrome patient most serious long-term complication:
Glomerulonephritis
Pulmonary interstitial fibrosis✓
Renal failure
Liver failure.
A female patient presents with bleeding from breast. No mass is found on examination and no axillary lymph node are palpable. What is the diagnosis?
Fat necrosis
Intraductal papilloma✓
Ductal CA
Fibrocystic disease.
Farmer's lung is due to:
Grain dust✓
Cotton fibre dust
Coal dust
Asbestos
All are features of irreversible cell injury except:
Karyolysis
Karyorhexis
Autolysis
Appearance of myelin figure✓
Patient underwent colostomy, after colon resection for colonic cancer. Best way to monitor for recurrence?
Alpha-feto protein levels
HCG
Colonoscopy
CEA levels✓
Following is specific to Thrombocytopenia:
Petechial haemorrhage✓
Prolong bleeding after trauma
Purpura
None of above.
Due to HTN heart undergo which phenomenon?
Cardiac cell hyperplasia
Cardiac cell hypertrophy✓
Increase in the mitochondrial number
All of above.
Which of the following hormone causes extrahepatic protein catabolism and hepatic protein anabolism?
Thyroid hormone
Epinephrine
Cortisol✓
Growth hormone.
Which of the following also cause SLE?
B cell dysfunction
T and B cells dysfunction
Immunological response to hydralazine✓
Anti-smooth muscle antibody.
Which statement is correct about nucleolus?
No limiting membrane✓
Contains DNA and ribosomes
Contains DNA only
Stains lightly basophilic.
Deficiency of B1 causes diseases by which of the following mechanism?
Amyloid deposition in neurons✓
Dermatitis
Neurofibrillary tangles
All of above
About monocytes:
Develop from same precursor with neutrophils✓
Active phagocytes in blood stream
Move from blood stream to tissues and back to blood stream.
Phagocytic cell present in circulation?
Monocytes
Neutrophils✓
Explanation: Neutrophils are phagocytic both in blood and tissue. Monocytes are only phagocytic inside tissue.
Which feature is not associated with irreversible cell injury?
Myelin figures
Karyolysis
Karyorrhexis
Mitochondrial shrinkage✓
Which is not the feature of irreversible cell injury?
Karyolysis
Karyorrhexis
Autolysis
Shrinkage of mitochondria✓
Appearance of myelin figure
Explanation: Myelin figures are present in both reversible and irreversible injury. Mitochondrial shrinkage is not feature of Irreversible cell injury.
True regarding Hermaphrodite genotype?
XY
XX✓
XXY
XY/XX.
Explanation: Xx>XX/XY
Virus causes carcinoma by oncogene mutation. Which carcinoma occur by this mechanism?
Retinoblastoma
Hepatic granuloma
Renal carcinoma
T. Cell leukaemia✓
Explanation: HTLV-1.

Carbon tetrachloride, acetaminophen and bromobenzene three well known hepatotoxins form reactive toxic metabolites within the liver cells after they have been metabolized in?
Nucleus
Nucleolus
Golgi apparatus
Smooth endoplasmic reticulum✓
Mitochondria
Betanapthylamine is associated with:
Carcinoma bladder✓
Renal carcinoma
Lung ca
Liver angiosarcoma
Radiation used in cancer radiotherapy:
Alpha
Beta
X-Ray✓
UV rays
Explanation: X-ray and gamma rays.
Which of the following is not neoplasia?
Choriostotoma✓
Lymphoma
Leiomyoma
Meningioma.
Permanent atrophy is caused by which of the following?
Loss of innervation✓
Hormonal Deficiency
Immobilization
Nutritional deficiency
Blockage of arterial supply.
The component of neoplasms that determines its biologic behaviour:
The stroma
The parenchyma✓
The vascular component
The lymphatic component.
Reversible abnormal shape, size and loss of orientation of cell is:
Dysplasia✓
Metaplasia
C-Desmoplasia
Anaplasia.
Explanation: abnormal cell with Reversibility is Dysplasia. Normal cell but different epithelium according to particular location and reversible is metaplasia.
Specific gravity of a transudate is:
Less than 1.020
Greater than 0.020
Greater than 1.013
Less than 1.012✓
Explanation: Specific gravity of exudate is greater than 1.020.
Most important in irreversible cell injury is which of the following?
Damage to cell membrane
Loss of co enzymes
Massive ca ion influx✓
Lysosome swelling.
Fat necrosis occurs in which of the following organ?
Acute pancreatitis✓
Heart
Liver
Kidney.
Cause Gastric lymphoma most common:
H pylori✓
Atrophic gastritis
EBV
HSV.
Myasthenia gravis is:
Type 2 Hypersensitivity reaction✓
Type 1
Type 3
Type 4.
Cyanide poisoning leads to inhibition of:
Hypoxic injury
Inhibition of cytochrome oxidation✓
GIT ulceration
None of above
12 years old boy with haemophilia a has had episodes of pain about his kness for past 6 years. over time, there has been an increase in size of his knee joint, with deformity. laboratory studies show decreased levels of coagulation factor viii activity. which of the following materials is most likely to be seen with joint space following episodes of pain?
Lipofuscin
Russel bodies
Neutrophils
Cholesterol crystals✓
Explanation: Russel bodies are found in Plasma cell tumor.
The main difference between primary and secondary intention wound healing would be:
Granulation tissue
Wound contraction✓
Inflammatory cells
None of above.
Most common presentation of patient with Turner:
Phenylketonuria
Down syndrome

Sickle-cell anemia
Cardiac complications✓
Factors that retarded the healing of wounds include all of the following except?
Infection
Ultraviolet light✓
Lack of immobilization
Diabetes mellitus.
True about hyperplasia is which of the following?
Cells with rapid mitosis
Occurs in old age
Usually irreversible
Cells with abnormal mitoses.
Edema due to increase hydrostatic pressure is seen in:
Congestive cardiac failure✓
Viral infection
Pericardial effusion
None of above.
Superimposed infection on necrosis is called:
Dry gangrene
Wet gangrene✓
Coagulative necrosis
All of above
Severe generalized edema is called:
Myxodema
Pitting edema
Non pitting edema
Anasarca✓
Patient on hypertension medications, presents with increase indirect bilirubin with positive coombs test. Drug most likely involved is:
Methyldopa✓
Hydralazine
Hydrochlorothiazide
Clonidine.
Explanation: Methyldopa is notorious for warm type Autoimmune hemolytic anemia.
Young girl has history of SOB & wheezing. Investigations reveal C1 deficiency & she lacks an esterase required by the body. Most likely diagnosis is:
Angioedema✓
Myeloperoxidase deficiency
SLE.
Explanation: It is known as C1 deficiency angioedema characterized by swelling of different parts of body. Bradykinin is responsible for swelling in this disease. **ACE** inhibitors are contraindicated in **Hereditary angioedema.**
A 50 years old man who has previous history of diabetic retinopathy & Ml presented with chest pain. Coronary occlusion occurs commonly due to:
Vasospasm
Embolism
Hypercoagulable state
Thrombosis✓
Following is seen first in MI:
Scar tissue
Contraction bands✓
Neutrophils
Plasma cells
Explanation: The earliest histologic change seen with acute MI during the first 24 hours is contraction band necrosis **Ref. # Robbins.**
Caspases are involved in which process?
Cell division
Necrosis
Apoptosis✓
Inflammation.
Who are true hermaphrodites?
46XX/46XY✓
XYY
YY
XO
HLA-DR4 associated with which of the following?
Rheumatoid arthritis✓
SLE
Scleroderma
None above.
P53 is tumor suppressor gene absence of mutation will cause:
Apoptosis
Cell survival✓
DNA repair
Mitosis.
Patient has swelling in right thigh which is increasing in size. X-ray showed no connection with bone. Best marker is:
Cytokeratin
Vimentin✓
Melanin
Fibronectin.
Increased lymphocytes are seen in patient of:
Hayfever
TB✓
Septicaemia
Polycythaemia
The malignant neoplasia which rarely metastasized is?
Basal cell carcinoma✓
Breast carcinoma
Bronchial carcinoma
Neuroblastoma.

Haemorrhagic infarction is seen in:
Lungs in pulmonary embolism✓
Liver in hypolemia
Myocardial infarction
Spleen in thromboembolism.
Dysplasia is recognized by which of the following?
Dyskeratosis
Loss of polarity and architecture of cell✓
Pleomorphism
None of above.
Which of the following is inappropriate statement?
Hyperplasia is increase in number of cells
Hypertrophy is increase in size
Hyperplasia and hypertrophy cannot occur in the same tissue✓
None of above.
Example of type II hypersensitivity reaction is:
Serum sickness
Graft versus host disease
Erythroblastosis fetalis✓
Toxoid reaction.
Diagnostic criteria for malignant tumours:
Pleomorphism
Mitotic figure
Local invasion✓
Hypertrophy and hyperplasia.
Explanation: **Macroscopic** Findings of malignant tumor Metastasis >Invasion
Microscopic findings: Pleomorphism.
Psammoma bodies formation is by which mechanism?
Hypercalcemia
Hypoparathyroidism
Dystrophic calcification✓
Metastatic calcification.
Starvation is associated with a reduction in size of all except:
Fat depots
Heart
CNS✓
Liver
Bar body in nucleus present in:
Normal female✓
Normal male
Turner syndrome.
45X0
Cervix has squamous cells. It is an example of which of the following?
Metaplasia✓
Anaplasia
Dysplasia
Hamartoma.
Estrogen does not cause following cancer:
Breast
Ovarian✓
Uterine
Prostate
Gallbladder
A patient with tumor that has metastasized to Para-aortic lymph nodes. She received Hormonal Therapy. After sometime Tumor regressed in size. This occurs by which process?
Apoptosis✓
Necrosis
Phagocytosis
Pinocytosis
Most common Cause of metaplasia is:
Ultrasonography
Chronic irritation✓
Infections
Radiations
Males are more commonly affected than females in which type of disorders?
Autosomal Dominant
Autosomal Recessive
X- Linked Dominant
X- Linked recessive✓
Central organ in apoptosis:
Mitochondria✓
Nucleus
ER
Golgi body
Lysosomes
Coagulative necrosis is typically seen with which phenomena?
Focal bacterial infections
Hypoxic death✓
Loss of tissue architecture
All of the above.
Pale Infarcts seen in all except which organ?
Kidney
Spleen
Heart
Lung✓

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HIGH YIELD POINTS OF IMMUNOLOGY

1.	B cells are present within follicles of white pulp
2.	T cells present in periarterial lymphatic sheath
3.	Thymus contains capsule but no lymphatic nodule
4.	Post splenectomy thrombocytosis>howell jowell bodies
5.	Definition of Graft versus host rex→immunocompetent T cells in the donor graft recognise recipient antigens as foreign and react against them.
6.	Hassal corpuscles contains epithellial reticular cells.
7.	Anti-basement membrane antibodies are positive in = Good Pasteur syndrome
8.	AIDS major cells affected helper Th1 cell.
9.	Fab portion is for antigen binding fragment.
10.	Fc portion is for complement binding.
11.	Smallest immunoglobin is igG.
12.	Largest ig z igM.
13.	Minimum serum conc IgE.
14.	Maximum serum conc IgG.
15.	Early or primary immune response igm
16.	Delayed or late IgG
17.	Warm antibody IgG
18.	Cold antibody igM
19.	Crosses placenta igG
20.	Present in milk igG n ig A
21.	Antigen recognized by B cells igG
22.	Classic pathway igM +igG
23.	Alternative pathway igA+igG
24.	C3b is for opsonization
25.	C3a+C4a+C5a anaphylaxis
26.	C5a chemotaxis for neutrophils
27.	C5b-9 cytolysis by Mac
28.	Reaction during transfusion type 1
29.	Reaction after blood transfusion type 2 and during is type 1.
30.	Aplastic anaemia type 2
31.	Aplastic anaemia along with h/o inj than its type 3
32.	H/o contact z type 4 hyypersensitivity is due to organism = Type 4
33.	H/o vaccine and transplant type 3
34.	Recurrent bacterial n enteroviral inf z agammaglobulinemia
35.	Most common 1° immunodef z igA def
36.	Agammaglobulinemia is B cell disoder
37.	Infectious mononucleosis = Atypical B cells
38.	Recurrent infection + thrombocytopenia + Eczema z wiskott aldrich syndrome
39.	Microtubule dysfunction n lysosomal defect z chediak higashi syndrome
40.	Anti TSH antibodies are positive in Graves disease.
41.	Autograft from self.
42.	Allograft from same species.

43.	Xetograft from diff species.
44.	Synergistic from identical or clone.
45.	Transplant rejection is due to preformed antibodies
46.	Aids not associated wth leukemia
47.	HLA DR 4 → RA
48.	HLA B 27 ankyloaing n reiters syndrome
49.	Heparin z released by mast cells not from basophils
50.	Commonest organism in transplant patient z CMV
51.	Most specific for SLE is→ Ant double stranded DNA
52.	Type 1 release IgE
53.	Type 2 igG>>Igm
54.	Type 3= immune complex mediated.
55.	Type 4 no antibody
56.	HLA gene present on chromosome 6.
57.	IgE found on surface of basophils, mast cells and Eosinophiils
58.	Patient with lung abscess n meningitis caused by → staph aureus (jahan kahin be abseccs ho sab se pehlay staph aureus ka sochen)
59.	Antibodies produced by plasma cells.
60.	HLA DR3 is associated with graves disease, SLE, Type 1 diabetes

NEOPLASIA

Pathology-Neoplasia:

Cellular Changes	
Hyperplasia	↑ In number of cells. May be a risk factor for future maignancy (e.g, endometrial hyperplasia) but not considered premalignant.
Hypertrophy	↑ in size of cells
Atrophy	↓ in tissue mass due to ↓ in size and /or number of cells. Causes unclude disuse, denervation, loss of blood supply, loss of hormonal stimulation, poor nutrition.
Dysplasia	Disordered, no-neoplastic cell growth. Term used only with epithelial cells. Mild dysplasia is usually reversible; severe dysplasia usually progresses to carcinoma in situ.
Metaplasia	Replacement of one cell type by another. Usually due to exposure to an irritant, such as gastric acid or cigarette smoke. Reversible if the irritant is removed but may undergo malignant transforation with persisten insult (e.g, Barrett esophagus → esophageal adenocarcinoma).Fuctional change in epithelium(ppr bcq)
Neoplasia	Uncontrolled, clonal proliferation of cells. Can be benign or malignant.
Anaplasia	Complete lack of differentiation of cells in a malignant neoplasm.
Differentiation	The degree to which a malignant tumore resembles its tissue of origin: • Well-differentiated tumors (often less aggressive) closely resemble their tissue of origin. • Poorly differentiated tumors (often more aggressive) look almost nothing like their tissue of origin.

TUMOUR SUPPRESSOR GENES:

Basics:

- Genes which normally control the cell cycle.
- Loss of function results in an increased risk of cancer.
- Both alleles must be mutated before cancer occurs.

Examples:

Gene	Associated cancers
P53	Common to many cancers as Li-Fraumeni syndrome
APC	Colorectal cancer
BRCA1	Breast and ovarian cancer
BRCA2	Breast and ovarian cancer
NF1	Neurofibromatosis
Rb	Retinoblastoma
WT1	Wilm'stumour
Multiple tumor suppressor 1 (MTS-1, p16)	Melanoma

Tumour suppressor genes:	***Loss*** of function results in an increased risk of cancer.
Oncogenes:	***Gain*** of function results in an increased risk of cancer.

p53 gene

P53 is a tumour suppressor gene located on chromosome 17p.
It is the most commonly mutated gene in **breast, colon and lung cancer**.
P53 is thought to play crucial role in the cell cycle, preventing entry into the S phase until DNA has been checked and repaired. It may also be a key regulator of apoptosis. **It helps in cell survival (ppr BCQ)**

Oncogenes:

Oncogenes are endogenous human deoxyribonucleic acid (DNA) sequences that arise from normal genes called proto-oncogenes.

Proto-oncogenes are normally expressed in many cells, particularly during fetal development, and are thought to play an important regulatory role in cell growth and development.

Alterations in the proto-oncogene can activate an oncogene, which produces unregulated gene activity, contributing directly to tumourgenesis.

Oncogene alterations are important causes of:

- Rhabdomyosarcomas (ras oncogene)
- Burkitt's lymphoma (C-myc is transolcated intact from its normal position on chromosome 8 to chromosome 14)
- Neuroblastoma (N-myc proto-oncogne is seen in a proportion of patients with poor prognosis **ppr bcq**).

They should be contrasted with tumour suppressor genes. In this situation, the genes normally down regulate cell growth, and require inactivation to allow malignant growth. Examples include retinoblastoma.

Leaking of fluid and cells:

- Implant removed, fluid leaking, type of cells: Giant cells
- Implant removed, no leaking, type of cells: Giant cells
- Implant not removed, leaking of fluid present, type of cells: Giant cells
- Implant removed, leaking of fluid plus signs of inflammation, type of cells: Neutrophils
- Implant not removed, no leaking but there is tenderness r other signs of inflammation, type of cells: Neutrophils
- Only these two types of cells we will find, there is no roll of immunity so no plasma cells...
- In breast implant type of cells: giant cells
    - But when inflammation mentioned then neutrophils simple.

Tumors:

- Basal cell carcinoma is (Boss) present on upper lip
- Squamous cell carcinoma is (secretary) so present on lower lip
- Sheets of Primitive Cells (blue cells) with Many Mitotic Figures = Medulloblastoma
- Ependyoma = can cause Hydrocephalus and form Rosettes.
- Germinoma - tumors of Pineal Gland, formed in children and adolescents.
    - Will present with
        - Precocious Puberty due to β-HCG Production (similar in testicular seminoma)
        - Obstructive Hydrocephalus
        - Parinaud Syndrome – paralysis of upward gaze
- Mass in anterior Mediastinum = Thymoma.

❖ Mass in posterior Mediastinum = Neurogenic Tumor.

SELECTED TUMOR MARKERS	
Hormones	
Human chorionic gonadotropin	Trophoblastic Tumors, nonseminomatous testicular tumors
Calcitonin	Medullary carcinoma of thyroid
Catecholamine and metabolites Ectopic Hormones	Pheochromocytoma and related tumors See "Paraneoplastic Syndromes"
Oncofetal Antigens	
α-Fetoprotein	Liver cell cancer, Nonseminomatous germ cell Tumors of testis.
Carninoembryonic antigen	Carcinomas of the colon, pancrease, lung, Stomach and heart.
Isoenzymes	
Prostatic acid phosphatase	Prostate cancer
Neuron-Specific enolase	Small-cell of lung, neuroblastoma
SPECIFIC	
Immunoglobulins	Multiple myeloma and other gammopathies
Prostate-Specific antigen and prostate-specific membrane antigen	Prostate cancer
Mucins and other Glycoproteins	
CA-125	Ovarian cancer
CA-19-9	Colon cancer, pancreatic cancer
CA-15-3	Breast cancer
NEW MOLECULAR MARKERS	
P53, APC, RAS mutants in stool and serum	Colon cancer
P53 and RAS mutants in stool and serum	Pancreatic cancer
P53 and RAS mutants in sputum and serum	Lung cancer
P53 mutants in urine	Bladder cancer

Cancers:

- In humans' cancers occurs through virus = Via Oncogen
- In humans' cancers occurs through radiations = Via Protooncogens

HISTOLOGY

Epithelium:
Epithelium is "**Avascular**" tissue covering body surfaces, lines body cavities, tubules and form Glands. It has high regeneration capacity. Epithelial tissues are composed of closely aggregated epithelial, polyhedral cells with very little extracellular substance. These cells may have cell surface specialization (eg: Cilia) and have strong adhesions (intercellular junctions eg: Gap Junctions, Tight Junctions, Desmosomes)
TYPES: (Arbitrary division both types may have intermixed)

Covering epithelia	Glandular epithelia
Eg: Simple Squamous Epithelium Pseudostratified Epithelium Stratified Squamous Epithelium	Eg: Goblet cells Exocrine and Endocrine Glands

➢ SIMPLE EPITHELIUM:

Simple Epithelium consists of 1 Layer of cells.

	SIMPLE SQUAMOUS	SIMPLE CUBOIDAL	SIMPLE COLUMNAR	PSEUDO STRATIFIED
Functions	-Lubrication -Secretion -Facilitates movement of visceras (eg: mesothelium), helps in transport by diffusion or active trAns:port by Pinocytosis	-Covering -Secretion -Absorption	-Protection -Lubrication -Absorption -Secretion	(Some ciliated, some columnar) -Protection -Secretion -Transport particles (ciliated)
Examples	-Lines blood vessels (endothelium), serous membranes eg pleura, pericardium and peritoneum (mesothelium) -Corneal endothelium -Alveoli (Type I Pneumocytes) -Parietal layer of BowmAns: capsule -ATL, DTL -Lymph vessels	-Lines thyroid follicular cells -Ependymal cells of choroid plexus -Lens of Eyes -Pigment epithelium of Retina -Respiratory bronchioles -Ovaries -Tubuli recti, rete testis -PCT, DCT	CILIATED -Pulmonary bronchioles -Uterus, uterine tubes -Central canal of spinal cord NON-CILIATED -GI (stomach, intestine, gallbladder) -Anal canal (above anal valve) -Endocervix -Efferent ductules	CILIATED -Nasal cavity -*Nasopharynx -Trachea -Primary bronchi -Larynx (false vocal cords) NON-CILIATED -Epididymis -Ductus deferens -Seminal vesicles -Membranous & Penile urethra

			-Ejaculatory ducts -Large excretory ducts of glands	

STRATIFIED EPITHELIUM:

Stratified Epithelium consists of more than 1 layer of cells.

	Stratified squamous	Stratified cuboidal	Stratified columnar	Transitional epithelium
Functions	-Protection -Prevent water loss	-Protection -Secretion	-Protection	-Protection -Dispensability
Examples	Keratinized dry -Skin -Gingiva, dorsum of tongue, hard palate -Lingual and palatine tonsils -Labia majora -External urethral orifice -Anus (inferior to Hiltons line) **Non Keratinized Moist** -Mouth, oropharynx -Esophagus -Larynx (True vocal cords) -Corneal epithelium -Female urethra -Vagina -Ectocervix -Fossa navicularis of penile urethra	-Sweat glands -Salivary glands -Mammary glands -Developing ovarian follicles	-Ocular conjunctiva (fornicieal and bulbar)	-Renal calcyces -Renal pelvis -Ureters -Urinary bladder -Prostatic Urethra

*The nasopharynx is lined by pseudostratified ciliated columnar (respiratory) epithelium but patches of squamous epithelium occur with increasing age, particularly near the lower end and most extensively in smokers. (Ref: Wheaters Functional Histology 6Th Ed.)

Cartilage:

Hyaline cartilage	Fibro-cartilage	Elastic cartilage

Articular cartilage	Intervertebral discs	Ear pinna
Costal cartilage	Glenoid labrum	External auditory tube
Nasal cartilage	Acetabular labrum	Epiglottis
Cricoid, thyroid and arytenoids	Menisci of knee	
Trachea, bronchi		
Epiphyseal cartilage of growing long bones		

SKIN:

- Dermis and epidermis (wear and tear epithelium)
- Stratified Squamous Keratinized epithelium.
- 5 Layers of epidermis: (Come Let's Get Sun Burn)

EPIDERMIS OF SKIN

Keratinocytes	Non-Keratinocyts
-Stratum **C**orneum	-Melanocytes
-Stratum **L**ucidum	-Merkel cells
-Stratum **G**ranulosum	-Langerhans cells
-Stratum **S**pinosum	
-Stratum Basale	

- Location of Melanocytes in skin: Stratum Basalis (Deepest of 5 Epidermal layers)

SALIVARY GLAND:

PAROTID	SUBMANDIBULAR	SUBLINGUAL
Serous	Mixed (serous more than mucinous)	Mucinous
Thick capsule	Capsule	Lacks capsule
Serous alveoli lined by pyramidal cells with central nuclei	Both serous + mucinous alveoli	Mucinous alveoli lined by columnar cells with basal nuclei
Acidophilic= pink		Basophilic= blue
Ducts= long and wide	Ducts= short and narrow	Ducts Absent

TONSILS:

- **Palatine:** Stratified squamous epithelium
- **Pharyngeal:** Pseudostratified ciliated columnar epithelium
- **Lingual:** Stratified squamous epithelium.

COLLAGEN:

Type 1	Type 2	Type 3	Type 4
Skin (dermis) Tendons Bones Most organs: Hypertrophic scar	Cartilage -Fibrocartilage has type 1 collagen -Hyaline and elastic has type 2 cartilage	Granulation tissue Muscle tissue Keloids Uterus Liver	Basement membrane

		Spleen Tunica intima of vessels	

Histology by KIM

Cilia contains Large number of mitochondria present at apex

RESPIRATORY SYSTEM:

Nose, pharynx, larynx, trachea bronchi _____ pseudostratified ciliated columnar.

Pre-Terminal bronchioles: Simple columnar.

Terminal bronchioles: Simple cuboidal.

Clara cells are most numerous in terminal bronchioles.

Respiratory bronchioles: Simple cuboidal.

Alveolar ducts and sacs: Simple cuboidal.

Alveoli: Simple squamous (Ref: difore)

TONSILS:

Lingual tonsils: Stratified squamous non keratinized.

Palatine tonsils: Stratified squamous non keratinized

GIT:

LIPS:

outside _____stratified squamous keratized epithelium.

Oral side _____ stratified squamous non keratinized epithelium.

Pharynx, esophagus _____ stratified squamous non keratinized epithelium.

Stomach _____simple columnar (no ciliated)

Small intestine_____ simple columnar

Large intestine_____ simple Columnar

Rectum _____simple Columnar

Anus: Above Hilton, white line ____ stratified squamous non keratinized.

Below Hilton, line _____ stratified squamous keratinized epithelium.

Gall bladder _____simple Columnar epithelium

Salivary glands:

♦**Parotid gland:** Largest gland, serous mainly**.**

♦**Sublingual** ___smallest, mucinous mainly

♦**submandibular:** Mixed type

In salivary glands there are 2 types of epithelium.

In intercalated ducts epithelium is simple cuboidal epithelium.

In secretory /large excretory duct epithelium is stratified squamous epithelium.

Kidney:

Nephron:

♦**PCT** → Simple cuboidal with microvilli.

♦**DCT** → Simple cuboidal with microvilli.

♦**Collecting duct → Simple cuboidal.**

♦Renal pelvis, ureter, urinary bladder, prostatic urethra → Transitional epithelium.

♦Membranous, penile urethra → Pseudostratified Columnar non ciliated.

♦**Medullary rays:** Light staining medullary rays vertically extends from bases of pyramids.

When ask about its location go for cortex?

Medullary rays consist of collecting ducts, blood vessels, straight portion of number of nephron (Ref: difore)

Reproductive system:

Ovaries → Simple cuboidal

Uterine tubes → Simple Columnar ciliated

Uterus → Simple Columnar

CERVIX:

Endocervix → Simple Columnar
Ectocervix → Stratified squamous non keratinized.
Vagina: Non keratinized stratified squamous but important point lamina propria of vagina contain dense, irregular connective tissue with elastic fibres (repeated MCQ).
♦ Thyriod gland → Simple cuboidal epithelium.

MCQs:

1. Regarding thyroid, which statement is correct?
Parathyroid lies anterior to posterior
Epithelium changes shape according to function
Collecting ducts are present in gland epithelium
No role in brain development
Ans: **B** (When thyroid gland is not secreting T3 and T4 (inactive), the epithelial cells range from low columnar to cuboidal cells. When active, the epithelial cells become tall columnar cells).

2. With respect to inactive follicles, active thyroid follicles:
Have abundant colloid
Are large
Have columnar cells
Both A and
Ans: **C** (Tall columnar – Refer to the above MCQ)

3. Which of the following is correct about thyroid gland?
Thyroid follicles are lined by simple columnar epithelium in actively state
Shape of follicular epithelium changes with the active status of gland
Calcitonin secreting cells are present within the follicles
Thyroglobulin is present in interstitial space
T4 is made by combination of DIT and MIT
Ans: **B**

♦Brunner glands with mucus secreting cells in the submucosa characterized duodenum. Peyer's patches are present in ileum.
♦Paneth cells are present at the base of intestinal glands throughout small intestine produce lysozyme.
♦M cells are overlying payer patches ad act as antigen presenting cells.
♦Strongest layer of small bowel is submucosa
Adenoid or pharyngeal tonsils pseudostratified Columnar ciliated respiratory epithelium
Payers patches cuboidal epithelium
Palatine tonsils non keratinized squamous epithelium
Lingual tonsils stratified squamous non keratinized epithelium.
Tubal tonsils ciliated nasopharyngeal (Pseudostratified ciliated columnar)
Transitional epithelium of Urinary bladder is derived from **Endoderm** ✓
Trigone of bladder is derived from **mesoderm**✓
Epithelium of bladder is derived from **endoderm and mesoderm** ✓
Columnar epithelium in lower end of esophagus shows **metaplasia** ✓
Old RBCs are destructed in and immunological filtering site **Red pulp of spleen.**
Antigen presenting cells are present in marginal zone o**f white pulp.**
T cells in Per arteriolar lymphoid tissue in white pulp.
B cells in follicles in white pulp.
Lymph node is subscapular with Afferent in capsules.
In lymph node T cell are present in paracprtex.
B cells are present in follicles in cortex.
Antigen presenting cells present antigen in white pulp Thymus Lacks Follicles.
Thymus has Hassel corpuscles.

IMPORTANT BCQS

1. Histology of Macula Densa:
a. Basal fold
b. Abundant Golgi organs
c. Smaller cells than surrounding
d. Large cells with prominent nuclei & scattered mitochondria in periphery✓

2. Histological slide of salivary gland showing large number of serous acini with some mucinous acini capped by serous demilunes.
a. Sub mandibular gland✓
b. Sublingual gland

3. A slide kept for histology which shows abundant mucinous glands with few serous glands and also few ducts were seen the gland is most likely?
a. Sublingual✓
b. Submandibular
c. Submental

4. Histology shows tubular structure with pseudostratified epithelium and thick muscle wall. Most likely structure is?
a. Vas deferens ✓
b. Prostate

5. About fibroblast it produces:
a. Amorphous substance✓
b. Collagen

6. Fibrocartilage:
a. It contains an amorphous substance
b. It is present inside disc of joints✓
c. Once damaged cannot regenerate
d. Contains elastic fibre

7. In chronic hepatitis histology on microscope will show?
a. Lymphocytes
b. Fibrosis✓
c. Neutrophils
d. Lymphocytes
e. Choroid plexus ependymal lining is covered by simple cuboidal epithelium✓

8. Surface epithelium of ovary?
a. Simple squamous
b. Simple cuboidal✓

9. Oocyte surrounded by flat epithelial cells:
a. Primary follicle
b. Primordial follicle✓
c. Griffin follicle
d. Antral follicle
e. Secondary follicle

10. Primary oocyte surrounded by which non cellular layer?
a. Theca internal
b. Theca external
c. Corona radiata
d. Cumulus oophorous
e. Zona pellucida✓

11. A surgical pathology specimen from a 24-year-old woman seen at a reproductive medicine clinic demonstrates a ciliated columnar epithelium. From which of the following locations in the female genital tract was the biopsy obtained?
a. Cervix
b. Endometrium
c. Fallopian tube✓
d. Ovary

12. Which of the following statement regarding cell division is not true?
a. Produces haploid number of chromosomes
b. Produces same number of chromosomes✓
c. Produces 2 cells
d. None of the above

13. Which of the following intracellular structure does not have cell membrane?
a. Mitochondria
b. Nucleus
c. Nucleolus✓
d. Endoplasmic reticulum

14. Which of the following type of cell junction allow exchange of cytoplasmic molecules between two cells?
a. Gap junctions✓
b. Tight junctions
c. Focal junctions
d. Anchoring junctions

15. Which of the following is found in the respiratory zone of the lung?
a. Goblet cells
b. Main bronchi
c. Mucous cells
d. Type I epithelial cells✓

16. A 49-year-old female with shortness of breath is found to have hilar lymphadenopathy on chest x-ray.

Biopsy of one of the lymph nodes reveals granulomas, and is highly suggestive of sarcoidosis. Which of the following histological findings must have been present in the biopsy material to support the diagnosis of granulomatous inflammation?

a. Asteroid bodies
b. Caseous necrosis
c. Epithelioid histiocytes✓
d. Fibroblast proliferation

17. Barr body is found in the following phase of the cell cycle:

a. Interphase✓
b. Metaphase
c. GI phase
d. Telophase

18. All of the following statements are true for metaphysis of bone, except:

It has greatest growth activity
It is the strongest part of bone✓
It is the most vascular part of bone
It is the region favouring hematogenous spread of infection

19. A 24-year-old delivery driver is involved in an accident and sustains a wide abrasion over his left elbow. The abrasion results in the total loss of epidermis over a large area of his left arm, but one month later, the abrasion has healed, with regrowth of the epidermis. Which of the following mechanisms accounts for the restoration of the epidermis over the abraded area?

Growth of epidermis from hair follicles and sweat glands in the dermis✓
Migration of endothelial cells from newly grown capillaries
Transformation of dermal fibroblasts into epidermal cells
Transformation of macrophages into epidermal cells

20. A patient presented with acute abdominal pain. On clinical suspicion the patient underwent cholecystectomy. On histopathological examination the finding is normal. Which of the following type of cells line the gallbladder?

Squamous epithelium
Simple columnar with brush border✓
Simple columnar
Simple columnar with stereocilia

21. Ear Lobule is made-up of:

Elastic cartilage✓
Hyaline cartilage
Fibrocartilage
All of the above

22. Which of the following type of cell is involved in myelination of the CNS?

Microglia
Astrocytes
Macrophages
Oligodendrocytes✓

23. Prostrate contains:

Only glandular tissue
Only fibromuscular tissue
Glandular tissue and fibromuscular tissue✓
Glandular tissue covered with transitional epithelium

24. Nuclei of rods and cones are present in which layer of retina?

Layer 1
Layer 2
Layer 3
Layer 4✓

An AIDS patient develops symptoms of pneumonia, and Pneumocystis carnie is suspected as the causative organism.

25. Bronchial lavage is performed. Which of the following stains would be most helpful in demonstrating the organism's cysts on slides made from the lavage fluid?

Alcian blue
Haematoxylin and eosin
Methenamine silver✓
Prussian blue

26. All are true about hepatocytes, except:

60% of the liver's cell number are formed by hepatocytes
Contains crystals of ferritin and hemosiderin
Contains enzyme urease in distinctive crystalline forms
None of the above✓

27. Which among the following is the epithelial lining of vagina?

Stratified squamous non-keratinized✓
Columnar
Stratified squamous keratinized
Cuboidal

28. Within which part of a gastric gland, are chief cells located?

Gastric PIT
Neck
Isthmus
Fundus

29. The presence of white fibrocartilage is a feature of all of the following, except:

Acetabular labrum
Intervertebral disc
Meniscus
Pinna✓

30. Which of following is the feature of Y chromosome?

Acrocentric
Telocentric
Submetacentric
Metacentric

31. A 27-year-old male presents to the doctor with complaints of "heartburn" and painful, sour-tasting acid reflux that has not been alleviated by over-the-counter medications. An endoscopic exam is performed and a biopsy of the distal esophagus is taken. Microscopic examination of the tissue shows normal tissue without pathologic changes. What type of mucosa is normal for the distal esophagus?

Ciliated, columnar epithelium
Keratinized, stratified, squamous epithelium
Non-ciliated, columnar epithelium
Non-keratinized, stratified, squamous epithelium

32. Which of the terms describes a centromere near the end of chromosome?

Acrocentric✓
Metacentric
Submetacentric
Telocentric

33. Urothelium lines all of the following renal structures, except:

Ureters
Minor calyx
Urinary bladder
Collecting duct✓

34. Ito cells are found in:

Brain
Kidney
Liver✓
Lung

35. Ito cells contain:

Vitamin A✓
Vitamin C
Vitamin D
None of the above

36. Histologic examination of normal skin demonstrates small numbers of perivascular cells, with darkly stained ovoid nuclei and granular cytoplasm on hematoxylin and eosin staining. The cells demonstrate metachromasia of the cytoplasm when stained with Giemsa stain. Which of the following products would these cells be most likely to secrete?

Bradykinin
Complement factor 3a
Histamine✓
Interleukin 2

37. Paneth cells are mainly found in the bases of the crypts in the small intestine. All of the following are true about paneth cells, except:

Rich in rough endoplasmic reticulum
High zinc content
Foamy cytoplasm✓
Numerous lysozyme granules

38. All the following features are seen in neurons from dorsal root ganglia, except:

They are multipolar✓
They contain lipofuscin granules
They have centrally located nuclei
They are derived from neural crest cells

39. The mucus seen in Chronic bronchitis patient is derived from which of the following cell types?

Alveolar macrophages
Goblet cells✓
Neuroendocrine cells
Type l pneumocyte

40. Which of following is not a permanent mucosal fold in GIT?

Spiral valve of Heister
Gastric rugae✓
Plica semilunaris
Transverse rectal fold

41. Pericytes, which are seen in the capillary bed are:

Modified endothelial cells
Phagocytes
Pluripotent cells lining the capillaries✓
None of the above

42. All of the following are cells present in cerebellar cortex, except:
Purkinje
Bipolar✓
Granule
Golgi

43. Mitochondria of a sperm is seen in:
Head
Neck
Body✓
Tail

44. Which of the following structure is made up of elastic cartilage?
Auditory tube✓
Nasal septum
Costal cartilage
Articular cartilage

45. Primary defect in structure is known as:
Malformation✓
Deformation
Disruption
Sequence

46. Not true about cell division:
Produces haploid number of chromosomes✓
Produces same number of chromosomes
Produces 2 cells
None of the above

47. Brunner's glands secrete an alkaline product that helps achieve optimal pH for the activity of pancreatic enzymes. Where are these glands located?
At the base of villi throughout the small intestine
In the epithelium of the ampulla of Vater
In the mucosa and submucosa of the jejunum
In the submucosa of the duodenum✓

48. A 35-year-old male presents to the urologist for an infertility evaluation. A biopsy of his testis is performed to check sperm production and maturation. A microscopic section reveals only a few germ cells near the basal lamina in the seminiferous tubule. Which of the following cells is the germ cell closest to the basal lamina in the seminiferous tubule?
Primary spermatocyte
Secondary spermatocyte
Spermatid
Spermatogonia✓

49. Which of the following sites contains striated muscle that is not under voluntary control?
Bladder
Colon
Esophagus✓
Gallbladder

50. Chief cells are most abundant in which part of the stomach?
Fundus✓
Body
Antrum
Pylorus

51. Intervertebral disc is an example of which category of cartilages?
Hyaline cartilage
Fibro cartilage✓
Elastic cartilage
Fibroelastic cartilage

52. Microscopic examination of a PAS-stained histological section through a Graafian follicle demonstrates a bright reddish-pink, acellular ring around the ovum. Which of the following terms most accurately describes this ring?
Corona radiata
Cumulus oophorus
Theca externa
Zona pellucida✓

53. The regionally named layer of tissue which encloses and binds muscle groups together is the:
Deep fascia✓
Intermuscular septum
Neurovascular bundle
Skin

54. Which type of cells are NOT found in stomach?
Chief cells
Parietal cells
Enterochromafine cells
Goblet cells✓

55. Which of the following is a characteristic feature of protective epithelium?
Regeneration of membrane✓
Microvilli
Absorptive properties
Secretory vesicles

56. In order for oxygen to diffuse from the alveolar air spaces to the site of its

binding to hemoglobin, it must diffuse across how many plasma membranes?

2
3
4
5✓

57. Transitional epithelium or urothelium lines all of the following structures of the urinary system, except:

Ureters
Minor calyx
Urinary bladder
Membranous Urethra✓

58. Which of the following type of cell does not migrate from the base of the crypt to ends of villi?

Enterocyte
Endocrine cell
Paneth cell✓
Goblet cell

59. In a section of lung tissue consisting dominantly of alveoli, a tubule about 2mm in diameter is observed that contains smooth muscle and cartilage in its wall. The tubule is which one of the following?

Alveolar duct
Alveolar sac
Bronchiole
Bronchus✓

60. A 40-year-old women presents with a several year history of progressive abdominal colic and constipation. Colonic biopsy stained with hematoxylin and eosin demonstrates deposition of a pink acellular material in the submucosa and around blood vessels. When sections from this biopsy are stained with Congo red, the acellular material exhibits green birefringence. The birefringence is thought to be most closely related to which of the following protein properties?

Ability to bind to oxygen
Beta-pleated sheet tertiary structure✓
Electrophoretic mobility
Hydroxyproline content

61. Regarding Brown adipose tissue which is false?

Nucleus of the fat cell is not pushed to the side
The fat cell contains one large fat droplet✓
Contains numerous mitochondria
Serves mainly as a heat generator in animals

62. All of the following are the components of the white pulp of spleen, except:

Periarteriolar lymphoid sheath
B cells
Antigen presenting cells
Vascular sinus✓

63. Which of the following type of bone cells have the characteristic most abundant rough endoplasmic reticulum, Golgi and secretory granules?

Osteocytes
Osteoprogenitor Cells
Bone lining cells
Osteoblasts✓

64. Regarding Brown adipose tissue, which of the following statements is false?

Nucleus of the fat cell is not pushed to the side
The fat cell contains one large fat droplet✓
Contains numerous mitochondria
Serves mainly as a heat generator in animals

65. All of the following statements about Paneth cells are true, except:

Rich in Zinc
Contain Lysozyme
Foamy appearance✓
Rich in Rough Endoplasmic Reticulum

66. Mucin secreting Goblet cells are present in all of the following structures, except:

Small intestine
Large intestine
Esophagus
Stomach✓

67. Damage to which of the following structures might produce hair cell loss?

Basilar membrane
Organ of Corti
Reissner's membrane
Scala tympani

68. The portion of the skin that serves as a barrier to water loss is the:

Dermis
Subcutaneous tissue

Deep fascia
Epidermis✓

69. Which of the following is an example of hyaline cartilage?
Epiglottis
Thyroid cartilage✓
Apex of Arytenoid Cartilage
Pinna

70. Enamel of teeth is derived from:
Endoderm
Mesoderm
Ectoderm✓
None of the above

71. Which of the following statements about osteoclasts is not true?
They have acidophilic cytoplasm
They stain strongly with alkaline phosphatase✓
The cytoplasmic surface that abuts the bone being resorbed is characterized by a clear zone and a ruffled border
They are found in Howship's lacunae

72. Which of the following is not an example of macroglia?
Schwann cells
Oligodendrocytes
Astrocytes
None of the above✓

73. "Respiratory" (i.e., ciliated pseudostratified columnar) epithelium is found in all of the following structures, except:
Nasal cavity
Trachea
Extra pulmonary bronchi
Alveoli

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HISTOLOGY

About RBC's what is correct?
Biconvex
Nonfragile
Largest of all cells
Have glycolytic enzyme activity✓

Which of the following protein maintains red cell shape?
Integrin
Secretin
Spectrin✓
All of above

About thymus what is true?
Rich in Lymphocytes
Present at birth but shortly regress after birth
Derived from 4th Pharyngeal Pouch
Lies posterior to Trachea

Where Lymph nodules are present?
Spleen
Thymus
Lymph node✓
None of above

End Hard keratin is found in where?
Cortex of hair
Nail✓
Stratiumcorneum
Stratiumspinosum

Epithelium of nephron is derived from:
Mesoderm✓
Endoderm
Endo + Meso
Endo + Ecto

Which one is absent in muscle?
Glucose 6 phosphatase✓
Hexokinase
Both a and b
None of above

Functional layer of endometrium consists of which of the following?
Stratum basalis
Stratum compactum and stratum spongiosum✓
Stratum basal and compactum
None of above

An organ lined by stratified squamous epithelium with increase cellularity vascularity, and elasticity, tubular glands in lamina propria is:
Vagina✓
Sq. Epithelium is present in vagina
Esophagus
Oropharynx

Smooth Single layer of epithelial cells is present around where?
Primary follicle✓
Secondary follicle
Tertiary follicle
Primary spermatogonia

Which is not "Major Basic tissue"?
Epithelium
Nerve
Bone
Blood✓

Where End arteries are presented?
Brain
Heart✓

Bone
None of above
Explanation: End arteries are coronary, splenic and renal.

Myelin in CNS is formed by which of the following:
Microglia
Schwan cells
Oligodendrocytes✓
Astrocytes.

Medullary rays are presented in:
Cortex✓
Medulla
Both A & B
Medullary cavity
Explanation: Medullary rays are present in cortex in the form of columns.

Epithelium of ovary is which of the following?
Simple cuboidal✓
Simple columnar
Simple squamous
None of above

Valve less vessel is called:
Aorta
Pulmonary artery
Pulmonary Trunk
Superior vena cava✓
Explanation: No valve present B/W SVC and right atrium hence pressure of right Atrium can be measured in IJV.

Following is absent in Axon hillock:
Rough endoplasmic reticulum✓
Smooth endoplasmic reticulum
Microtubules
Microfilaments

Axon hillock does not contain which of the following?
Mitochondria
Nussle substance✓
Both A & B
None of above

Characteristics of Smooth muscles are:
Striated
Voluntary
Mostly arranged in circular and longitudinal layers✓
None of above

About large intestine which of the following is true?
Descending colon has no haustra
Appendix has no tenia✓
All large gut is supplied by inferior mesenteric artery
Ascending colon has a mesentery
Explanation: Appendix is devoid of Tenia and do not perform any digestive function.

Strongest layer of small intestine is which of the following?
Circular
Longitudinal
Mucosa
Submucosa✓

Most probable about gall bladder is which of the following?
Has thick submucousa
Mucousa has extensive folds✓
Explanation: **Gall** bladder lacks muscularis mucosa and submucosa.

Regarding esophagus histology what is true?
Covered by squamous epithelium
Has stratified squamous epithelium in upper 1/3✓
Has stratified squamous in lower 1/3
Has 3 layers of muscle.

Erythropoietin is secreted from which cells?
Liver cell
Peri tubular interstitium of kidney✓
Macula densa of kidney
All of above.

Flow of current through junctions occur in which muscle?
Smooth muscle
Skeletal muscle
Cardiac muscle✓
All of above
Explanation: Intercalated disc of cardiac muscles allow flow of current through junctions.

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FCPS-I IMPORTANT Past Paper BCQS POINTS OF MICROBIOLOGY Already Came in Exam Many Times

1. Chronic Fungal infection with rhinos inusitis causing medial erosion and granulomas = Aspergillus
2. Amoeba causes lesions in which part of gut = Cecum
3. Cerebral Malaria caused by = Plasmodium Falciparium
4. Dental carries due to = SretptococcusAns:
5. Scenario was given about Bangladeshi man & massive splenomegaly = LeishmaniasAns:
6. Antibiotic for pseudomonas = Ciprofloxacin
7. Endotoxin causes = Sepsis
8. A Gardener with fever cough on x-ray lower right chest calcified esion = Aspergilosis
9. Q fever is caused by = Rickettsia
10. Post op wound having greenish pus discharge organism involved = Pseudomonas
11. Which parasite is not transmitted thruor ofecal route = Trichenella Spiralis
12. Baby born on 4th day most common cause of Meningitis = E.Coli
13. Diabetic patient with DKA died due to = Mucormycosis
14. Cholangio carcinoma caused by = Cholonorchis Sinensis
15. Farmer with migratory lesion on foot = Cutaneous Larva migrans.
16. Eating raw runde rcooked meat can cause infection by = Tapeworm
17. Man comes 1st time to Pakistan develops fever than coma, on investigation retics10% platelets ↓ = Falciparum
18. Herpez simplex virus transmitted by = Droplet
19. In the hospitals most, common cause of wound infection = Staph aureus
20. Gas gangrene cause of death = Toxemia
21. About Trichomonas vaginalis what is correct = Is sexually transmitted
22. Gardener right side chest pain 3.5cm calcification on rt lower lobe = Aspergilosis
23. Drug of choice for Neisseria Meningitidis = PenicillinG
24. Child present wth fever, rash appear is behind ear then spread to chest and extremities, diagnosis = Measles
25. Scenario on fisherman with anemia, which parasitic infection = Diphylbothrium leutm
26. Diagnosis of Leprosy at initials tested by = M Leprae in Nasal Scrapings
27. Patient presented with erythematous swelling of back side of hand what will be drug of first choice = Clxocillin
28. Thorn prick...abscess formation most likely organism = Staph aureus
29. Pseudo membranous colitis caused by which = Clostridium dificile
30. Most common cause of gas gangrene lower limb = Clostridium welchii
31. Patient has Gonococcus infection what is quicke way to check it = Gram stain
32. Post abdominal and gynaecological surgeries cause is = Which is beta lactamse resistant and doesn't respond to penicillin = Bacteriodes
33. Vibrio cholera diarrhea mechanism = Increase Cl channels
34. Patient develop scarlet fever = Erythrogenic Toxins
35. Young patient burning pain during urination, afebrile, thin yellowish discharge = Gonorrhoea
36. Fungi causing Meningitis = Cryptococcus
37. A Scenario of Post Streptococcal Infection mechanism is involving = Antigen Antibody Complex.
38. Which fluoroquinolone is the preferred drug for treating combined infection with gonorrhea and Chlamydia = Ofloxacin?
39. Sample taken for traponema pallidum infection detection = Genital swab
40. Phimosis, Utis, fever, chills, organism involved = Staph. Aureus
41. A 60yr Female had discharging sinus in wound yellow granules, most likely causative agent is = Actinomyces
42. Pulmonary symptoms caused by which parasitic disease = Ascariasis
43. Organism which produces flourscent pigments and resistant to antibiotic & antiseptic = Pseudomonas
44. A patient goes Renal transplant, he is on immunosuppressive therapy and

develops angular chelitis causative agent is = CMV

45. Shigella dysentery effects due to = Mucosal invasion
46. Burkits lymphoma is caused by EBV because = Antibodies to viral capsid are present in all individuals with burkitt lymphoma.
47. Cysticercosis caused by = Ingesting eggs of tenia solium
48. A person living on river sides ince 2yrs, having blindness, ophthalmologist indentify which larva = Onchcerosis
49. Pulmonary symptom caused by which parasitic disease = Ascariasis
50. Chlamydial infection causing Chlamydia psittacosisi = Obligate intracellular
51. Botulinum = Flaccid paralysis of respiratory muscles
52. For pseudomonas drug is ciprofloxacin
53. Painful papule at labi = HSV-II
54. Cholangiocarcinoma caused by = Cholonorchis Sinensis
55. Incubation period of which disease is longest = Infectious Mononucleosis
56. Cause of global blindness = Chlamydia Trochamatis
57. Warthin starry stain used in = Spirochete
58. Soldier came after many years in sibbi hepatosplenomegaly lymphadenopathy hx of fly bite Low grade fever = Kala azar
59. Resistent to chloroquine what to give = Mefloquine
60. Old man presented with persistant cough and thick mucoid sputum = Klebsiella
61. ITP scenario was given. Splenectomy done which organism will cause post splenectomy recurrent infections = Hemophilis influenza
62. Young ptient with peri tonsillar abscess causative agent = Streptococcus
63. Patient with AML under gone bone marrow transplant pneumonia histology showing large cells with intrcellular inclusion, cause is = CMV
64. A patient with liver transplantation, there is increased risk of problems from = CMV
65. Typhoid fever during 2nd week is = Blood culture and widal test
1. Bloodculture → 1st week
2. Agglutinatination (blood culture+widal) → 2nd week
3. Stool culture → 3rd week
4. Urine culture → 4th week
66. Human is an intermediate host of = Echinococcus granulosus
67. Most common cause of global blindness is = Chlamydial infection
68. Actinomycosis = Granuloma + Abscess
69. A young man presented with low grade fever for last three months. On examination, his nasal bridge was distorted and cervical lymphnode were palpable. Histology of these lymph node revealed non caseating granuloma and positive AFB stain most probable diagnosisis = Leprosy
70. Hiv after surgery cleaning of room is done by = 2% glutara ldehyde.
71. Formaldehyde → Presevation
72. Causes of hepatocellular carcinoma in developing countries = Hepatitis B and C
73. A 28-year Fisher man presented with slow developing lethargy, easy fatigue and palpitation. His diet comprises of fish and rise. On physical examination He has pallor, loss of touch sense. His CBC showed HB 7,5 platelet 110000. His stool report showed Ova of intestinal parasite. The most likely causative parasite is = Diphylo bothrium Latum.
74. Typhoid fever, test during 1st week is = Blood culture
75. A 40 years old man (HafizUllah) from Sibi Baloch is came with fever and Lymphadenopathy With the H/O of sleeping on floor and often bite by flie = On Peripheral bood film…Uni cellular structure can be seen=Kala azar (leishmaniasis)
76. A man having Hep C on histology eosinophilic granules in cytoplasm with compact chromatin = Apoptosis
77. Systemic fungal infection drug given Amphotericin B
78. Pregnant with jaundice went to remote village to see her parents cause = Hep. E (remote areas Hep E is common otherwise most coomon cause of hepatitis in pregnant lady is Hep A)

Remember Here:

A → Acute and most common → hepatitisA
B → blood → Hepatistis B
C → chronic → hepatitis C
D → death → hepatitis D
E → epidemic → hepatitis E

79. Cholangicarcinoma. causative organism is = Clonorchis sinensis
80. Glycocalyx contains = Carbohydrate moiety
81. For Atypical bacteria coverage the drug of choice = Macrolides
82. Gray baby syndrome and spastic anemia are the established side effects of = Chlormphenicol
83. A diabetic patient presented with increasing degree of progressive illness involving respiratory system gastrointestinal. What can be the cause = Mucor mycosis
84. Which of the following is ecto parasite = Lice?
85. A patient suffering from lobar pneumonia causative organ = Pneumococcus
86. 20 years old boy came with mild jaundice. His hbsAg is negative ...anti Hbc igM is neg..... anti Hbe positive. Whats the current situation = Acute resolving phase
87. Pseudomonas producing shock through = Endotoxins
88. Post natal conjunctivitis is caused by = Chlymadia trachomatis
89. After splenectomy child is least susceptible to following infection = E. coli
90. Sub acute endocarditis = Spreptococcus viridans.
91. Which of the following antibiotic is not folate synthesis blocker = Metronidazole?
92. Which of the following is inhibitor of Peptidoglycan? Formation by binding to bla bla portion of cellwall precursor = Vancomycin
93. Post natal conjunctivitis is caused by = Chlymadia trachomatis
94. The life-threatening clinical condition caused by clostridium perfringens = Diffuse clostridial myositis.
95. child have no fever, but diarrhea for many days, on microscopy curved and gram-negative bacteria = Vibrio cholrae.
96. Dubai taxi driver fever, malaise and lymphedenopathy and other immunosuppressive Features = AIDS
97. Mechanism of action of metronidazoleis = Damaged DNA
98. Microscopic finding of TB = Caseous granuloma
99. Baby born, on 4th day developed meningitis ...organism involved is = E. coli
100. Definitive diagnosis of TB = AFB
101. EBV is associated with all of following malignancies except = Multiple myeloma
102. A person living on river side since 2year.... having blindness opthalmologist identify the larva of = Oncho cercosis
103. Brucellosis is transmitted by = Unpasteurized milk
104. One of following disease is not associated with AIDS = Squamous cell carcinoma
105. Regarding aspergillosis which incorrect = Occurs commonly in patients on long term antibiotics
106. myocarditis scenario organism involved = Cocksackie virus
107. Osyeomylitis in sickle ćell disease is caused by = Salmonella
108. Hand, foot, mouth disease is caused by = coxsackie virus type A
109. Hydrops foetalis in pregnant women is caused by = Parvo virus
110. Hutchinson teeth is characteristic of = Congenital syphilis
111. Most common cause of sub acute PID = Chlamydia trachomatis
112. Fits pruritus, cought, honey moon rhinitis syndrome is the complication of = Untreated PID
113. Current jelly sputum is characteristic features of = Klebsiella pneumonia
114. Trichomonas vaginalis = Sexually transmitted
115. Actinomycosis doesn't cause lesion in = Brain.
116. Regarding nisseria gonorrhea = It is gram negative diplococcus
117. The indigenous flora of healthy human adult doesn't include = Bordetella pertusis

118. The most common cause of gram-negative infection in a patient with septic shock is the infection in = Urinary tract
119. Alpha hemolytic bacteria are = S. Pneumoniae
120. Pneumonia in patient of cystic fibrosis is by = Pseudomonas aureginosa
121. Most common cause of surgical wounds infection is = Staph aureus
122. A baby has erythematosus, sand paper like rash with fever and sore throat causative agent would be = Sreppyogenes
123. A female is infected by trichomonas vaginalis appropriate treatment is = Metronedazole to both partners.
124. Most common cause PID is = Chlamydia
125. Which antibiotic is giving prior to surgery to prevent staph aureus wound infection = Cefazolin
126. Infectious Mononucleaosis = Mono spot test
127. Pseudo membranous colitis caused by clostridium difficile treated with = Oral Metronidazole.
128. A 20-year-old female presents with cervical lymphadenopathy. The histological examination of lymph node shows granulomata. The diagnosis of tuberculosis in this case is strongly suggested due to = Caseous necrosis
129. Characteristics finding of clostridium botulinum is = Flaccid paralysis of respiratory muscle
130. One of the following is not oncogenic virus = Hep. – D
131. Vasculitis related with hepatitis = Hep. B
132. Chronic hepatitis is characterized for how many duration = 6 months

MICROORGANISMS Causing Infections

133. Ascetic tap - E.coli
134. Peritonitis - E.coli.
135. Travellers' diarrhea- E.coli (enterotoxins)
136. Pyogenic peritonitis - Bacteroids.
137. Puerperal sepsis – group B strept>> Bacteroids.
138. P.O abdominal and gynaecological infection - Bacteroids.
139. Abscess - S.Aureus.
140. Acute osteomyelitis - S.Aureus most common
141. Toxic shock syndrome - S.Aureus.
142. Wound infection - S.Aureus > Pseudomonas.
143. Hospital acquired pneumonia - S.Aureus.
144. Pyogenic lung abscess + Meningitis – S.Aureus
145. Septic meninis – Streptococcus pneumonia
146. Initiation of dental caries – Streptococcus mutants
147. Sub-acute bacterial endocarditis - S.viridiAns:.
148. Prosthetic valve endocarditis - S.epidermidis.
149. Cellulitis - S.pyogenes.
150. Toxic shock syndrome- S.pyogenes
151. Scarlet fever (erythrogenic toxin, blanching rash)- S.pyogenes
152. Multiple draining sinuses = Actinomycosis.
153. Tubo ovarian abscess by IUCD = Actinomycosis.
154. Yellow granules = Actinomycosis
155. Granuloma + abscess = Actinomycosis
156. Trachoma - Chlamydia.
157. Pelvic inflammatory disease - Chlamydia.
158. Lymphogranuloma venereum - Chlamydia.
159. Pseudomembranous colitis - C.Difficile.
160. Gas gangrene - C.Perfringes (alpha toxin) / C.Welchii.
161. Fatal diarrhea - V.Cholrea.
162. Tubulo ovarian cyst – N. Gonococcus.
163. Valvular itching + Pink purulent discharge - Trichomanas vaginilis.
164. Infection (pneumonia) in post liver transplant patient - CMV.
165. Chorioretinitis in AIDS - CMV.
166. Bronchogenic carcinoma - Smoking
167. Herpangia - Coxsakie virus.
168. Hand foot and mouth disease - Coxsakie virus
169. Warthin-Finkeldey gaint cell (fused lymphocytes) → Measles virus
170. Subacute sclerosing panencephalitis→ Measles
171. Lymphoma in AIDS - EBV.
172. Burkitt lymphoma - EBV.

173. Non-Hodgkin lymphoma - EBV.
174. Hairy tongue - EBV.
175. Nasopharyngeal carcinoma - EBV.
176. Infectious mononucleosis - EBV.
177. Francisella tularensis (bacterium found in rabbits, hares)→ tularemia
178. Kaposi sarcoma - HHV8.
179. Cervical cancer - HPV 16.
180. Vulval papules - HSV.
181. Meningo-encephalitis - Echovirus.
182. Meninigitis in AIDS - Cryptococcus neoformans.
183. Brain abscess in AIDS —Toxoplasma gondii
184. Black water fever - Plasmodium falciparum.
185. Cysticercosis - Taenia solium (caused by ingesting eggs of Taenia solium)
186. Cyst in liver - Teania echinococcus.
187. SCC of bladder - Schistosomiasis.
188. Cholangio carcinoma - Clonorchis Sinensis.
189. Migratory lesion of foot - Cutaneous larva migrans → Ancylostoma duodenale.
190. Toxoplasmosis – Cat
191. Global blindness and most common cause of PID = Chlamydia
192. Person living on river side having blindness due to larva-- would be = Oncherosis
193. Fish like smell: Bacterial Vaginosis → Gardenella vaginalis
194. Histoplasmosis effect= reticuloendothelial system (macrophage filled with histoplasmosis)
195. Food poisoning is caused by
    a. Staph aureus (enterotoxin)
    b. Bacillus cereus (reheated rice syndrome and with pasta)
196. Warthin starry stain used for = Spirochetes
197. Diarrhea, RUQ pain, liver abscess, flask shaped ulcer → Entamoeba histolytica
198. Dead organisms in vaccine = Pertussis
199. Gram negative bacteria causes infection of which system = Urinary tract.
200. Preterm delivry = Bactrial vaginosis
201. All of the following will cause lesion at genital tract except = Gonorrhoea
202. Baby born on 4th day most common cause of Meninis = E. Coli (remeber: in newborns, group B strep group ie strep agalactea is on the top)
203. Incubation period of which disease is longest = Infectious Mononucleosis.
204. Infective endocarditis diagnostic investigation = Blood culture (blood culture for diagnosis & ASO titre for the evidence of infection
205. Margins of TB ulcer = Undermined
206. Scenario of granuloma with yellow pigment = Actinomyeces
207. Which of the following in maternal serum for rubella should b an indication for termination of pregnancy = IgM?
208. 8-month Baby boy with repeated rhinitis 2episodes of pneumonia in less then mnth.low plasma B cells n decreased immunoglobulins = IgA deficency.
209. A boy with testiculs swelling nd fever viral infection = Mumps.
210. A man having recurrent bacterial infections with streptococci also having diarrhea which on examination showed giardiasis, urther exam revealed normal T cells but ↓B cells levels of IgM, IgG and IgA were given = Bruton's agamma globulinemia.
211. About Trichomonas vaginalis what is correct = Is sexually transmitted
212. An obese man with h/o atherosclerosis underwent laparotomy due bleeding in and during surgery his small gut was purple n sup mesenteric vein was ok so what is dx = wet gangerene
213. Antibody receptors are = hypervariable regions of H and L chains
214. Boy age 4 yr 4 days of fever, genralized lymphadenopathy and purpuric raash = infectious mononucleosis
215. Burkit lymphoma in AIDS = EBV
216. Chlamydial infection causing chlamydia psittacosis is, = Obligate intracellular
217. Common carcinogen of CA Cervix = HPV
218. Congenital cataract = Rubella
219. Death due Clostridium botilinum = Paralysis of respiratory muscle
220. Diabetic patient with DKA died due to = Mucormycosis
221. Farmer wid migratory lesion on foot = Cutaneous Larva migrans
222. Female with fever for 10 days and chest pain that aggravates on lying down. Pain is originated at = Pericardium…
223. Gas gangrene. Cause of death = Toxemia
224. Herpez simplex virus transmitted by = Droplet
225. HIV female which one of the following carcinomas do occure = Cervical carcinoma.

226. In the hospitals most, common cause of wound infection = Staph aureus (Ecoli 2nd most common).
227. Orofecal transmission = HEV
228. Painful papule at labia = hsv II (HSV I am on lips Face, but now a days the rule is not followed strickly).
229. Patient came in with sore throat, fever and lymphadenopathy. His monspot test was positive his blood picture shows atypical leukocytosis. What is the type of cell that is affected =B- cell
230. Pertusis, Cholera, Influenza, Inj Polio & Rabies all Killed vaccines while Tetanus is Toxoid and MMR is Live attenuated
231. Pertusis. = nasopharyngeal and bronchial secretion spread.
232. Post op wound having greenish pus discharge organism involved = Pseudomonas
233. Pt comes in to the emergency department with seizures. His BP is 90/60. His serum calcium level is 6, serum cortical level is 6 microg/dl, sugar level is 80 mg/dl. What is the diagnosis = Tetany?
234. Pt having H/o cough cloudy yellow colour effusion fluid containing 98 % neutrophil nd 2% lymphocyte the fluid was dull to percussion = Purulent exudate.
235. Pyogenic peritonitis – Bacteroids
236. Virus act by =altering proteins synthesis
237. Virus in Human causes cancer via = Oncogen (Radiations via Proto-oncogens).

STERILIZATION:

Asepsis means absence of pathogenic microbes.
Sterilization process of destroying all microbes including spores
Most resistant to antiseptics **prions.**
Hand washing chlorhexidine, isopropyalcohol.
Sporicidal Glutaraldehyde, formaldehyde, Ethylene oxide, Halogens.
Spores of bacteria are destroyed by **autoclaving** at $120C^0$ for 15 minutes.
Hypochlorite are virucidal.
Principle of autoclaving is denaturation and protein coagulation.
Radiation is used to sterilize bone graft, artificial tissue graft and sutures.
Endoscope is sterilized by 2% **glutaraldehyde.**
Heat labile instruments like plastic syringes by Ethylene
Gamma radiations are used for sterilizing syringes.
OT is sterilized by formaldehyde gas.
Hospital waste are disposed by **incineration.**
For HIV, OT Floor is cleans by 1% **hypochlorite** and Instruments by 2% **glutaraldehyde.**
Dry heat kills bacteria by _____**Oxidation.**
Moist heat by_____ **Coagulation of protein.**
GOLD standard test for H. Pylori - microbiological culture.
Avian flu is_____ **H5N1**
Swine flu _____ **H1N1**
For sepsis diagnostic test is **blood culture**
HDV is not oncogenic by its own
Slapped cheeck parvovirus
Syphilis _____condyloma lata.
HpV _____condyloma acumunatum.

VIRAL HEPATITIS:

Most common Acute Viral Hepatitis → Hep A
Most common Acute viral hepatitis in children → Hep A
Most common acute viral hep (epidemic/sporadic) in adults → Hep E
Most common Viral Hepatitis in Pregnant females → Hep A
Most common cause of epidemics of viral hepatitis → Hep E
Most common cause of chronic Viral Hepatitis→ Hep C
Most common cause of Liver Cirrhosis → Hep C
Most common Viral Hepatitis causing HCC → Hep B

Most Common cause of Hepatitis carriers / Carrier State → Hep B
Most common hepatitis associated with transfusion → Hep B
Most common cause for fulminant hepatitis → Hep D
Most lethal Hepatitis Virus → Hep D (Coinfection)
Most Lethal Viral Hepatitis in Pregnancy → Hep E

Vaccines contraindicated in HIV are:

Cholera
Intranasal influenza
Oral polio
BCG

Vaccines that can be given when cd4 count is greater than 200:

MMR
Varicella
Yellow fever
Note # Injectable polio that is IPV can be given.
Hiv is contraindication for breast milk and cesarean section is recommended

GENITAL ULCERS:

Painful are:

a) Behcet disease
b) Genital herpes (HSV2) associated with **painful adenopathy**
c) Chancroid (Hemophilus Ducreyi)

Painless are:

a) SlE
b) Primary syphilis
c) Lymphogranuloma venerum (Chlamydia) associated with **painful adenopathy and**
d) Granuloma inguinale (Klebsiella granulomatous)

Culture media:

a) H-Influenza Chocolate agar
b) Neisseria Thayer martin agar
c) B-pertussis Bordet Gengou agar
d) C diphtheria Loffler medium
e) MTB _____LJ Medium (ZN staining).
f) ECOLI_____produce green metallic sheen on # EMB agar

- Gram Positive Rods are spore Forming
- P- aeruginosa (Blue Green pigment) ventilator associated Pneumonia)
- Staph epidermidis catheter and prosthetic device infection.
- Pilus mediate adherence of bacteria to cell surface.
- Outer membrane only in gram negative bacteria.
- Outer leaflet of outer membrane contains endotoxin.
- Periplasmic space contains beta lactamase activity.
- **Lactose non - fermentor mnemonic (Spys**) salmonella, proteus, Yersinia, Shigella
- **Slow -fermenters** serraia, Citrobacter
- **Fast fermenters (Knee),** Klebsiella, E.Coli, Enterobacter
- Endotoxin location of gene chromosome
  Exotoxin location of gene plasmid or bacteriophage
- Tetanospasmin block release of GABA
- Botulinum Toxin block release of acetylcholine
- **Gram Positive Rods**

ABC2D – L:

- Actinomyces(anaerobic)
- Bacillus

- Clostridium (anaerobe)
- Corynebacterium # Diphtheria
- Listeria

Gram positive Cocci:
Staphylococci
Streptococci
Gram negative cocci:
Neisseria
Moraxella
Rest are Gram negative Rods

- PCP pneumonia prophylaxis with TMP-SMX in HIV when CD4count is less than 200
- Mycobacterium avium Complex prophylaxis in HIV by azithromycin when CD4 count is less than 50
- Ghon complex is characteristic of primary TB usually involve mid and lower lobe
- Cavitary lesion is characteristic of secondary tb involve upper lobe
- Mycobacterium leprosy (Henson disease) affect superficial nerves Glove and stoking sensory loss ..
- Lepromatous in immunocompromised.
- Tuberculoid leprae in immunocompetent.
- Campylobacter grows at 42 C
- Vibrio Grows in alkaline medium
- Neisseria meningitis has Capsule and maltose fermenter
- Neisseria gonorrhea do not have capsule and non-lactose fermenter
- Brucella contaminated dairy products # Undulant fever
- Legionella pneumonia silver stain # Hyponatremia, air condition, Both exo and endotoxin, Grape like odour, Mucoid capsule
- Shigella cell to cell spread, not hematogenous, bacillary dysentery, invasion Of M cells
- Yersinia # Pseudoappendicitis
- Enterotoxigenic E.coli travelers diarrhea
- Enterohemorrhagic #HUS syndromee
- Klebsiella Currant jelly sputum, Alcoholics and diabetics
- Lyme disease # Borrelia face palsy, myocarditis AV block, migratory arthralgia erythema migrans
- **Lyme disease** # Borrelia is Beautiful

That the Characteristic erythema migrans affects Face and Heart leading to:

a) Fascial palsy
b) Myocarditis
c) AV block

Syphilis # Primary
Pain less chancre Dark field Microscopy to visualize treponema in fluid of **chancre # Secondary**
Maculopapular rash, co**ndyloma lata,** FTA - ABs is confirmatory **# Tertiary**
GUMMAS, neurosyphilis, aortitis, stroke, Argyll Robertson pupil.
Congenital syphilis
Saddle nose, notched (Hutchinson) teeth, mulberry molars, and short maxilla; saber shins; CN VIII deafness**.**
Weil felix test is done for the identification of: Rickettsia.
Fever is caused by Coxiella brunette: It has got no arthropod vector and transferred by inhaled aerosols from cattle/Sheep amniotic fluid.
MALARIA:

- Shortest pre-erythrocytic phase seen in: **Falciparum.**
- Longest proerythrocyte intrahepatic Malariae
- Species that cause relapse vivax → ovale
- Malignant tertian malaria falciparum
- Benign tertian malaria ovale/vivax
- Quartan malaria Malariae
- Quotidian malria falciparum /Knowlesi
- Anemia in malaria normocytic normochromic
- Dormant phase of malaria - Hypnozoite
- ■malaria spread to human - Sporozoite
- ■sporozoite divide in liver is - Merozoite
- ■hypnozoite present in - Ovale and vivax
- ■New specie of malaria - Knowlesi.

1. **Quotidian or malignant tertian malaria is caused by:**
   a. P Malaria
   b. P falciparum✓
   c. P ovale
   d. P vivax
   e. None
2. **Simple Tertian malaria is caused by:**
   a. P Malaria
   b. P falciparium
   c. P ovale

d. P vivax✓
e. None

3 Quartan malaria is caused by:

a. P Malaria✓
b. P falciparum
c. P ovale
d. P vivax
e. None

Explanation:

- Quotidian fever _____ Daily spikes with no pattern
- Tertian fever _____ Every 48 hours
- Quartan fever _____ Every 72 hours

Quotidian also called _____malignant tertian

TB drugs:

Isoniazid

☆ Peripheral Neuropathy

Rifampicin:

☆ Dark colour of urine

☆ Withdrawal symptoms

☆ Failure of Contraception

Ethambutol:

☆ Bacteriostatic

☆ Colour Blindness

Pyrazinamide:

☆ Gout/Hyperuricemia

☆ Partially Bacteriostatic

a) Lung cavitation - aureus /pseudomonas
b) Ascetic tap - E.coli
c) Peritonitis - E.coli.
d) Pyogenic peritonitis - Bacteroides.
e) Puerperal sepsis - Bacteroides.
f) P.O abdominal and gynecological infection - Bacteroides.
g) Abscess - S. Aureus.
h) Acute osteomyelitis - S. Aureus.
i) Toxic shock syndrome - S. Aureus.
j) Wound infection - S. Aureus → Pseudomonas.
k) Hospital acquired pneumonia - S. Aureus.
l) Septic meningitis - Streptococcus.
m) Initiation of dental caries - Streptococcus.
n) Pyogenic lung abscess + Meningitis - Staphylococcus.
o) Subacute bacterial endocarditis - Viridians.
p) Prosthetic valve endocarditis - S. Epidermidis.
q) Cellulitis - S. Pyogenes.
r) Multiple draining sinuses - Actinomyces.
s) IUCD infection - Actinomycosis.
t) Trachoma - Chlamydia.
u) Pelvic inflammatory disease - Chlamydia.
v) Lymphogranuloma venereum - Chlamydia.
w) Pseudomembranous colitis - C. Difficile.
x) Gas gangrene - C. Perfringens / C. Welchii.
y) Fatal diarrhea - V. Cholera.
z) Abscess - S. Aureus.
aa) Acute osteomyelitis - S. Aureus.
bb) Osteomyelitis in sickle – Salmonella
cc) Toxic shock syndrome - S. Aureus.
dd) Wound infection - S.A
ee) Valvular itching + Pink purulent discharge - Trichomanas vaginilis.
ff) Infection in post liver transplant patient - CMV.
gg) Chorioretinitis in AIDS - CMV.
hh) Herpangia - Coxsakie virus.
ii) Hand foot and mouth disease - Coxsakie virus
jj) Lymphoma in AIDS - EBV.
kk) Burkitt lymphoma - EBV.
ll) Non hodgkin lymphoma - EBV.
mm) Hairy tongue - EBV.
nn) Nasopharyngeal carcinoma - EBV.
oo) Infectious mononucleosis - EBV.
pp) Kaposi sarcoma - HHV8.
qq) Cervical cancer - HPV 16.
rr) Vulval papules - HSV.
ss) Meningo-encephalitis - Echovirus.
tt) Meningitis in AIDS - Cryptococcus neoformans.
uu) Black water fever - Plasmodium falciparum.
vv) Cysticercosis - Taenia solium.
ww) Cyst in liver - Teania echinococcus.
xx) SCC of bladder - Schistosomiasis.
yy) Cholangio carcinoma - Clonorchis Sinensis.
zz) Migratory lesion of foot - **Cutaneous larva migrans.**
aaa) Toxoplasmosis - Cat

Parasite hints Associations Organism:

a) Biliary tract disease, cholangiocarcinoma Clonorchis sinensis.

b) Brain cysts, seizures Taenia solium (neurocysticercosis).
c) Hematuria, squamous cell bladder cancer Schistosoma haematobium.
d) Liver (hydatid) cysts Echinococcus granulosus.
e) Microcytic anemia Ancylostoma, Necator.
f) Myalgias, periorbital edema Trichinella spiralis.
g) Perianal pruritus Enterobius.
h) Portal hypertension Schistosoma mansoni, Schistosoma japonicum.
i) Vitamin B12 deficiency Diphyllobothrium latum.

PNEUMONIA:

- Commonest community acquired streptococcus pneumonia
- Hospital acquired staph aureus
- Ventilator associated pseudomonas
- Pneumonia after viral infection staph aureus

Common causes of pneumonia

NEONATES (< 4 WK)	CHILDREN (4 WK–18 YR)	ADULTS (18–40 YR)	ADULTS (40–65 YR)	ELDERLY
Group B streptococci	Viruses (RSV)	*Mycoplasma*	*S pneumoniae*	*S pneumoniae*
E coli	*Mycoplasma*	*C pneumoniae*	*H influenzae*	Influenza virus
	C trachomatis (infants–3 yr)	*S pneumoniae*	Anaerobes	Anaerobes
	C pneumoniae (school-aged children)	Viruses (eg, influenza)	Viruses	*H influenzae*
	S pneumoniae		*Mycoplasma*	Gram ⊖ rods
	Runts May Cough Chunky Sputum			

- Pneumonia in diabetic and alcoholics klebsiella
- Pneumonia with rusty sputum strep pneumonia
- Pneumonia with currant jelly sputum klebsiella
- Pneumonia in aids patient PCP
- Pneumonia in copD patient h-influenza and Moraxella
- Pneumonia in cystic fibrosis pseudomonas
- Atypical pneumonia mycoplasma
- Walking pneumonia mycoplasma
- Air condition related pneumonia legionella
- Pneumonia with hyponatremia Legionella

1. Virulence of bacteria depends upon?
a) Dose of toxin✓
b) Age
c) Type of toxin
d) Duration of exposure
e) None of above

Explanation: The terms "virulence" and "pathogenicity" are often used interchangeably. For example, virulence can be quantified by how many organisms are required to cause disease in fifty percent of those exposed to the pathogen (ID50, where I = Infectious and D = Dose), or to kill fifty percent of test animals. (**Ref # Lippincott Microbiology).**
Low ID50 high Virulence**. High ID50** Low virulence.

2. Which of the following most probably has animal reservoirs?
a) Influenza✓
b) Small pox
c) Measles
d) None of above.

3. The most common organism associated with hypersensitivity reaction is?
a) M. tuberculosis✓
b) Herpes simplex
c) None of these.

4. Septic shock most commonly caused by:
a) Gram positive bacteria✓
b) Gram negative bacteria
c) Virus
d) Fungi

Explanation: Septic shock is most frequently triggered by Gram-positive bacterial infections 65% → Staphylococci (Most common). Gram-negative bacteria 25 % → E.Coli most common. Fungi 9%. → Candida Most Common Also most common sites for infection leading to sepsis Lungs > Blood > Abdomen > Urinary tract > Skin.

Ref and Concept: Robbins pathology Chapter 4

5. Most common cause of gram-negative septic shock is:

a) E. Coli✓
b) Staphylococcus
c) Pseudomonas
d) All of the above.

6. For the purpose of disinfection hands should be washed with:

a) Phenol
b) Alcohol with chlorhexidine✓
c) Formaldehyde
d) None of above

Explanation: Alcohol and chlorhexidine have got prolonged bactericidal effect.

7. In new born infant the commonest source of Tetanus is which of the following?

a. Soil
b. B. Feces
c. Ear piercing
d. Umbilicus✓

8. Cause of global blindness is which of the following?

a. Herpes Simplex
b. Rubella
c. Chlamydia Trachomatous✓
d. Clostridium.

9. Patient presented with bloody diarrhea and rectal prolapse. Surgeon diagnosed that it is due to some parasite having small anterior end and invades the out mucosa the Organism would be?

a. Ascaris Lumbricoides
b. Trichuris trichiura✓
c. Loa Loa
d. Tenia solium.

10. Most common etiological agent for tumor in AIDS:

a. EBV✓
b. CMV
c. HPV
d. HSV.

11. Diagnostic feature of plasmodium falciparum:

a. Black water fever✓
b. Malaria
c. DIC
d. Diarrhoea.

12. After splenectomy child is least susceptible to which of the following infection?

a. Streptococcus
b. H influenza
c. Pneumococcal
d. E. Coli✓

Explanation: Important About Post Splenectomy Sepsis: Typically, Encapsulated Organisms cause the post-splenectomy sepsis-related infection. The most common organism causing Post-Splenectomy Sepsis → **Streptococcus Pneumoniae** (AKA Pneumococcus → Accounts fo**r 50%** of septic episodes in most series.

The order of infection after splenectomy is → S. Pneumoniae > H. Influenza > N. Meningitidis > Beta hemolytic Streptococcus > Staphylococcus Aureus > **Escherichia Coli** > Pseudomonas sp.

Current Guidelines for prevention of Post-Splenectomy Sepsis are → Vaccinate with pentavalent pneumococcal vaccine at least 10-14 days prior to Elective splenectomy. If the splenectomy is URGENT → Wait until 14 days post-procedure to vaccinate. In high risk pts (Immunocompromised and child < 10yrs) → Also Meningococcal and HIB vaccine. Antibiotic prophylaxis in all children <5yrs

Reference and further concept → Sabiston Textbook of Surgery (Bible of Surgery) 18/e chapter 56 + Greenfield's Surgery-Scientific Principles and Practice, 5/e, 1218/p.

13. Tubo Ovarian abscess caused by IUCDs. What is the most likely causative agent?

a. Actinomycosis✓
b. Streptococcus
c. Staphylococcus
d. Mycobacterium tuberculosis.

14. A patient presented with neck rigidity his lab shows CSF protein 400mgdl glucose 40mg, 400 lymphocyte diagnosis is:

a. TBM✓
b. Bacterial meningitis
c. Viral meningitis
d. Encephalitis.

Explanation: Characteristic findings of tubercular meningitis on CSF are lymphocytic predominant pleocytosis, elevated protein & low glucose.

15. Aedes mosquito transmits all expect?

a. Japanese's virus✓
b. Rift valley fever
c. Dengue
d. Dengue hemorrhagic

e. Yellow fever.

17. 6 years old girl has meningitis and the Most common organism would be?
a. Streptococcus pneumonia✓
b. Neisseria meningitis
c. H. Influenza
d. E. Coli

Explanation: Infant /children S. Pneumonia > N. Meningitis > H influenza > Neonates GBS> listeria > E. coli.

18. A 20 years old male patient presents to the STD clinic with a genital ulcer. The gram stain of the smear from ulcer shows gram negative coccobacilli. The most appropriate media for culture would be:
a. Thayer Martin Medium
b. Blood agar with X & V factors
c. Chocolate agar with IsoVitaleX✓
d. Tellurite blood agar

Explanation: Hemophillus Ducreyi.

19. In Asthma, one should test antibodies against:
a. Legionella
b. Mycoplasma
c. Aspergillus✓
d. Chlamydia

Explanation: ABPA → Allergic Bronchopulmonary Aspergillosis.

20. In CSF exam, if protein high and sugar low but no bacteria then organism is more likely?
a. Histoplasma
b. Cryptococcus✓
c. Herpes simplex
d. Pneumocystis carinii
e. Candida.

21. Patient died of anemia, weight loss after infection with histoplasmosis system involved would be?
a. GIT
b. CNS
c. GUS
d. Respiratory system
e. Reticuloendothelial system✓

22. Most anti-bacterial activity occurs during which phase of bacterial growth:
a. Log phase✓
b. Lag phase
c. Stationary phase
d. Same activity in all phase

23. A child present with a white patch over tonsil:
a. Loffler medium✓
b. LJ medium
c. Blood agar
d. Tellurite medium.

24. A female after coming from foreign develops lesion/nodules on the side of her face and eye vision issue increasing gradually. Relate to which of the following?
a. Onchocerca volvulus✓
b. Loa Loa

25. A woman after returning from Africa comes to you with swollen eyes and worm in eye organism is?
a. Loa Loa✓
b. Ascaris.

26. Visceral larva migrans is caused by:
a. Toxocara canis✓
b. Loa loa
c. Ascaris lumbricoids
d. Wuchereria bancrofti.

27. Patient presented with history of fever with chills abdominal pain and vomiting and has history of sleeping on floor?
a. Malaria
b. Yellow fever
c. Leishmaniasis✓
d. Dengue.

28. Co-trimoxazole action in HIV patient, it acts on pneumocystis carini through?
a. Inhibit cell wall synthesis
b. Inhibit folic acid synthesis✓
c. Inhibit microtubules
d. Damage DNA.

29. True about Rickettsia?
a. Atypical cell walls and gram-negative bacteria
b. Grows on 7% sheep blood agar
c. Does not have glycolytic enzymes✓
d. It is normal flora in mosquito

Explanation: Rickettsia is pleomorphic (atypical) gram negative bacteria. It does not have any cell wall. So atypical cell wall option is not suitable. It is **obligate intracellular.** Rely on host ATP. IT doesn't have glycolytic enzymes. Giemsa stain is used to visualise them. It's not a normal flora of mosquito. Its natural reservoir are mammals and its transmitted through insect or tick vectors.

Reference: **FA 2018** page 125 126 128 and **Harrison.**

30. Target tissue of Rickettsia is:
a. Endothelial cells✓
b. Nervous tissue
c. Macrophages
d. Muscle cells
e. Blood cells

31. Presence of delta antigen shows (HDV):
a. Infectivity
b. Recovery
c. Chronicity✓
d. Acute phase
e. Measure of severity/fatality of the disease.

32. True regarding Pin worm life cycle:
a. Ingested in form egg✓
b. Ingested in form of larva congested in form of cyst
c. Transmitted through larva.

33. Virus does not cause:
a. Lipoma✓
b. Kaposi sarcoma
c. Cervical cancer
d. Pneumonia.

34. A 9 years old boy after knee operation developed fever tenderness swollen knee with puss filled lesion, blood test showed beta hemolytic, catalase positive and coagulase positive organism. Which of the following organism is culprit for this case?
a. Staph. Aureus✓
b. Gonorrhoea
c. Streptococcus
d. E. Coli.

35. Virulence factor of staphylococcus?
a. Coagulase +ve
b. Protein A✓
c. Protein O
d. D. Protein S.

36. The Clostridium perferingens acts by?
a. Producing lecithin's✓
b. Depleting ATP
c. Causing hypoxia
d. None of above.

37. Amoebic infection reaches lungs via:
a. Direct extension from liver✓
b. By aspiration of ova of Entameoba histolitica.
c. By aspiration of trophozoits of Entameoba histolitica.
d. Via Portal vein.

38. A patient present with diarrhea and culture reveal slightly curved bacilli gram negative bacteria. Most likely organism will be which of the following?
a. Salmonella
b. Shigella
c. Helicobacter jejuni
d. Vibrio cholera✓

Explanation: Curved gram negative rods include Campylobacter, H-Pylori, Vibrio cholera.

39. Diphtheria adopt which route of transmission?
a. Sexual contact
b. Respiratory✓
c. Feco oral
d. Semen.

40. Food poisoning by staph aureus mediated by:
a. Endotoxin
b. Enterotoxin✓
c. Leucidin

41. Granuloma with suppuration
a. Nocardia fungus✓
b. Aspergillus
c. Amoeba

42. After appendicectomy, a pt develops chronic wound infection with sinus tract formation & secretion of fluid containing yellow granules. Which of the following organisms is probably the cause of this condition?
a. Nocardia
b. Actinomycosis✓
c. H- Pylori
d. Entamoeba Histolytica
e. E. Coli

43. A 50 years old man has squamous cell carcinoma of urinary bladder. Two years back he presented with hematuria a biopsy of the bladder mucosa had revealed a granulomatous lesion. Which of the following is most likely the cause of his malignancy?
a. Option A: Transitional metaplasia
b. Option B: Tuberculosis
c. Option C: Schistosomiasis✓
d. Option D: Bladder stone
e. Option E: Nitrosamines

44. Cysticercosis is caused by:
a. Tinea solium✓
b. Tinea saginati

c. Entameba histolytica
d. Echinococcus granulosis
e. Candida Albicans

45. Which of the following disorders is most likely to be associated with spinal cord compression & psoas (cold) abscess?
a. Chronic osteomyelitis
b. Fracture repair
c. Osteitis fibrosa cystica
d. Tuberculous osteomyelitis✓
e. Osteomalacia

46. Following infection with measles virus, a 6- Year-old boy produces antibodies to all eight viral proteins. The following year he is again exposed to measles virus: antibodies to which viral protein are most likely to be protective?
a. Hemagglutinin✓
b. Matrix
c. Non-structural
d. Nucleocapsid
e. Polymerase

47. More than 90% of all patients with anthrax have:
a. Gastrointestinal haemorrhage
b. Haemorrhagic pneumonia
c. Liver failure
d. Septicemia
e. Skin lesions✓

48. Cysticercosis in human being is caused by eating:
a. Egg of tinea saginata
b. Egg of tinea solium✓
c. Raw or partly cooked beef
d. Raw or partly cooked fish
e. Raw or partly cooked mutton

49. The least transmitted virus by blood transfusion is:
a. Cytomegalovirus
b. Epstein barr virus✓
c. HTLV-1 and HTLV-2
d. Hepatitis A
e. Parvovirus

50. The diagnostic microscopic feature of a tuberculous lesion is:
a. Caseating granuloma✓
b. Langhan's type of giant cells
c. Localized collection of epithelioid cells
d. Localized collection of histiocytes
e. Pyogenic granuloma

51. The characteristic microscopic feature of actinomyces infection is
a. Abscess
b. Granuloma with abscess✓
c. Large number of giant cells
d. Large number of plasma cells
e. Non-caseating granuloma

52. The characteristic feature of infection by atypical mycobacteria is that it:
a. Can be diagnosed easily
b. Causes only lung infection
c. Heals quickly
d. Is resistant to common anti-tubercular drugs✓
e. Is very common

53. The commonest organism responsible for hospital acquired infection is:
a. Haemophilus
b. Klebsiella
c. Pseudomonas aeruginosa
d. Staphylococcus aureus✓
e. Streptococcus pneumonia

54. Clostridia:
a. Are facultative anaerobes
b. Are gram negative rods
c. Are mostly spore forming bacteria✓
d. Clostridium difficile causes gangrene
e. Clostridium perfringens causes diarrhoea

55. Organisms leading to pseudomembranous colitis include:
a. Campylobacter jejuni
b. Clostridium botulinum
c. Clostridium difficile✓
d. Clostridium perfringens
e. Yersinia enterocolitica

56. The edge of a tuberculous ulcer is usually:
a. Option A: Everted
b. Option B: Inverted
c. Option C: Punched out
d. Option D: Shelving
e. Option E: Undermined✓

57. The commonest organism responsible for causing gas gangrene is:
a. Clostridium bifermantans
b. Clostridium histolyticum
c. Clostridium oedematiens
d. Clostridium septum
e. Clostridium welchii✓

58. The most dangerous infection in post liver transplant patient is:
a. C.M. virus✓

b. E.B. virus
c. Hepatitis B virus
d. Hepatitis C virus
e. MRSA

59. The most likely organism in ascetic tap would be:
a. E. Coli✓
b. Pseudomonas auroginosa
c. Staph aureus
d. Streptococcus pyogenes
e. Yersinia enterocolitica

60. Human chlamydia producing psittacosis, conjunctivitis and urethritis has one of the following properties:
a. Cell wall provided by host
b. Contains only DNA
c. Intracellular obligates✓
d. Responds to penicillin's
e. Smaller than virus

61. Faecal-oral route is the mode of spread of:
a. Bacillus tetani
b. Filaria
c. H.I.V infection
d. Hepatitis A infection✓
e. Mycobacterium tuberculosis

62. The easiest method to demonstrate gonococci in the exudate is:
a. Bacterial culture of exudate
b. Biochemical test
c. Grams stain of the exudate✓
d. P.C.R.
e. Z.N. stain

63. The disease for which immunological test is of diagnostic value?
a. Amoebic liver abscess
b. Giardiasis
c. Gonococcal infection
d. Hydatid cyst of liver✓
e. Moniliasis

64. The bacterial wound infection which is resistant to majority of antibiotics is caused by:
a. Esch. Coli
b. Klebsiella spp
c. Proteus vulgaris
d. Pseudomonas aeruginosa✓
e. Staphylococcus spp

65. Chlamydia is the etiological agent for:
a. Acute salpingitis
b. Acute urethritis
c. Chancroid
d. Condyloma latum
e. Lymphogranuloma venereum✓

66. Clostridium perfringes produces cell injury by:
a. Causing local hypoxia
b. Disturbing citric acid cycle
c. Elaborating phospholipase✓
d. Inhibiting glycolysis
e. Producing ATP depletion

67. The organism which does not produce vaginal discharge is?
a. Candida albicans
b. Gardenella vaginalis
c. Haemophilus ducreyi✓
d. Neisseria gonorrhoea
e. Trichomonas vaginalis

68. Ascaris lumbricoides:
a. Infective larvae are passed in the faeces
b. Length is less than an inch
c. May cause appendicitis✓
d. May cause auto-infection
e. May cause iron deficiency anaemia

69. Which one the following statements best explains the relationship between inflammation of the heart (carditis) and infection with group a beta-hemolytic streptococci?
a. Streptococci activate HLA class I antigens
b. Streptococci antigens bind to IgE on the surface of heart tissue and histamine Is released
c. Streptococci antigens induce antibodies cross-reactive with Heart tissue✓
d. Streptococci are activator of B cells
e. Streptococci are ingested by neutrophils that release proteases that damage heart tissue

70. Brucellosis is transmitted by:
a. Files
b. Ras fish
c. Unpasteurized Milk✓
d. Airborne
e. Blood transfusion:

71. During pregnancy, a female is diagnosed as HIV+. After delivery she is worried about transmission of disease to her baby. Which of the following investigation will be most appropriate for confirmation of Infection in the baby?
a. Western blot test
b. ELISA

c. Viral culture
d. P. C. R✓
e. Southern blot test

72. After an elective cholecystectomy, a female develops hospital acquired wound infection. Which of the following organisms is most likely the culprit?
a. E. Coli
b. Staphylococcus aureus✓
c. Streptococcus pneumonia
d. Proteus

73. Brodie abscess is characterized by:
a. Achondroplasia
b. Osteogenesis imperfecta
c. Osteoarthritis
d. Osteoporosis
e. Pyogenic osteomyelitis✓

74. Infection most likely caused by DNA virus:
a. Infectious mononucleosis✓
b. Influenza
c. Measles
d. Mumps
e. Yellow fever

75. The most frequent nonbacterial opportunistic organism recovered from burns:
a. Aspergillus
b. Candidiasis✓
c. Fuserum
d. Herpes
e. Phycomycetous

Explanation: After Candida, the most common types of fungi that invade burn wounds are Aspergillus and Fusarium.
Reference: Schwartz's Principles of Surgery

76. Among following one organism is involved in hypersensitivity reaction:
a. Mycobacterium tuberculosis✓
b. Mycobacterium Leprae
c. Streptococcus pyogenes
d. Klebsiella
e. Aspergilosis

77. Following disease produce granulomas except:
a. Actinomyces
b. Amoeba✓
c. Crohn's disease
d. Sarcoidosis
e. Tuberculosis

78. Trachoma:
a. Most occur in hot & humid area
b. Caused by chlamydia Species✓
c. Is a genitourinary infection
d. Transmitted by respiratory droplets
e. Causes trachomitis in retina

79. Most appropriate skin disinfectant:
a. Alcohol solution of chlorhexidine✓
b. Formaldehyde
c. Glutaraldehyde
d. Phenol
e. Quaternary ammonium compound.

80. Clostridium botulinum specific symptoms in food poisoning?
a. Diarrhoea
b. Flacid paralysis of respiratory muscles✓
c. Projectile vomiting
d. Convulsions
e. Skin lesions

81. Which of the following disease is caused by the bite of mosquito?
a. Ochronosis
b. Filariasis✓
c. Whipple
d. Ascariasis
e. Giardiasis

82. A person after the thorn prick presents in the emergency with the localized abscess of left leg. The organism responsible for abscess most likely is:
a. Pseudomonas aeruginosa
b. Staphylococcus aureus✓
c. E. Coli
d. Streptococcus pyogenes
e. Staphylococcus epidermidis

83. Young boy with 3-week history of facial weakness and nasopharyngeal sinusitis. On examination bilateral facial weakness, with drooling on mouth was noticed. Most likely diagnosis is?
a. H.Influenza
b. Corynibacterium✓
c. Herpes
d. Brucellosis.

84. HBV not present in:
a. Milk
b. Sweat
c. Stool✓
d. Lymph
e. Tears

85. Pulmonary symptoms caused by which parasitic disease?
a. Ascariasis✓
b. Hydatid cysts
c. Cystercercosis
d. None of the above.

86. A Patient is taking immunosuppressant now has neck rigidity. CSF has high WBC mostly Lymphocytes. On microscopy organism has a halo around it. The Causative organism is?
a. Cryptococcosis✓
b. Toxoplasmosis
c. Histoplasmosis
d. Candida

Explanation: Its caused by Cryptococcus neoformans an encapsulated yeast. When it is stained by india ink stain the particles of ink do not enter the capsule and surrounds the spherical yeast cell resulting in halo formation.

87. Liver malignancy caused by:
a. Echinococcus
b. Schistosoma
c. Clonorchis sinensis✓
d. T. Saginata

88. Most common cause of osteomyelitis is which of the following?
a. Staphylococcus aureus✓
b. Mycobacterium tuberculosis
c. Fungi
d. Viral.

89. Hairy tongue on a homosexual patient is due to which of the followings?
a. Always be reddish brown in color
b. Due to the overgrowth of chromogenic bacteria✓
c. Due to anaerobic bacteria
d. Due to fungal infection.

Explanation: **Hairy tongue;** an elongated appearance of **filiform papillae** that may tend to enlarge and cause a false illusion if they are occupied by **chromogenic bacteria.**

90. Most common etiological agent causing infective endocarditis is?
a. Staph aureus
b. Strep viridians✓
c. Strep bovis
d. H. Influenza

91. 6 years old boy presented with sore throat and fever. His microbiological review shows complete hemolysis on sheep blood agar. Most likely diagnosis will be which of the following?
a. Group A beta hemolytic streptococcus✓
b. Staph aureus
c. Group b streptococcus
d. Diphtheria.

92. In emergency treatment of tetanus one should use?
a. ATS
b. ATG✓
c. Tetanus toxoid
d. None of the above.

93. Weil felix test is done for the identification of:
a. Klebsiella
b. Rickettsia✓
c. Pseudomonas
d. Toxoplasmosis.

94. Strains of staph develop resistance to penicillin through?
a. Transformation of plasmid
b. Transduction of plasmid✓
c. Transduction of bacteriophage
d. Transformation of bacteriophage.

95. A girl during her menstruation developed high grade fever because she was using Tampons. Microorganism responsible for her symptoms is which of the following?
a. E.coli
b. Staphylococcus Aureus✓
c. Streptococcus Epidermidis
d. Streptococcus Pyogenes

96. A 46-year-old farmer with history of discharging sinus on foot, smear shows red granule and filaments 1-3 microns, which is most appropriate?
a. Actinomyces
b. Corynebacterium
c. Medurula mycetoma
d. Actinomyces pellettieri✓

97. In infectious Mononucleosis structure most likely to be damaged even on minor trauma?
a. Liver
b. Spleen✓
c. Gall bladder
d. Pancreas

BIOCHEMISTRY

Marfan syndrome Vs Homocystinuria

Marfan has superior temporal lens dislocation.
Homocystinuria has inferionasal lens dislocation.
In homocystenuria there is **low IQ**
In marfin there is high IQ compared to homocysteinuria
In marfin everything is high
In homocysteinuria everything is high except lens and IQ

Lipid Lowering Drugs:
Drugs that best lower TGs
Fibrates > Niacin > Statins
Drugs that best lower LDL cholesterol
Statins > Ezetimibe > Bile Resins > Niacin
Drugs that best Raise HDL
Niacin > Fibrates > Statins > Fish Oil

High Yield Cell Cycle:
Cell cycle:
Chromosomes first appear in prophase
Thickest and best studied at metaphase
Parallel chromatids in prophase
Radiosensitive G2/M phase
M phase is more radiosensitive then G2 phase.
Radio resistant is S phase
Chemo sensitive is S phase
Longest phase G1 phase
Shortest is M phase

Some Important BCQS:
Ribosomes produce cytosolic proteins like mitochondrial
RER produce secretary proteins
Nucleosomes has no limiting membrane
Nucleosomes contain abundant RNA
Proteasomes helps in breakdown of misfolded proteins
Chaperons prevent misfolded protein formation.
Exons are expressed.
Introns are not expressed
Peroxisomes help in breakdown of long chain fatty acids.
SER is used for synthesis of steroid hormones and detoxification of Drugs and alcohol.
11. Active cells that synthesize protein are light stained (euchromatin)
12. Have prominent nuclei and are basophilic due to abundant RNA which is basophilic
13. Bar body is heterochromatin and is inactive
15. Methylation makes DNA mute
16. Frame shift mutation is more dangerous
17. Dystrophin Gene is the largest gene
18. Largest number of exons # Tintin gene
19. Longest single exon # Tintin gene
20. Longest coding sequence # Tintin
21. Longest primary transcript # Dystrophin Gene

Oncogenes and proto - Oncogenes
Virus leads to cancer # by using # Oncogene ✓
By # Altering proto-oncogene ✓

By # Altering protein synthesis ✓
One option among them will be given as in my paper there was # Virus leads to cancer by # Altering Proto - oncogene was not in option
Protein synthesis was in option so i clicked protein synthesis ✓
Don't mix up by putting all options in one MCQ then u will be confused

Important about collagen in wound:
Predominant collagen in Keloid → Type III
Predominant collagen in Scar → Type I
Predominant collagen in hypertrophic scar is → Type III
Collagen increasing the strength of wound → TypeIII and strength of scar type I
Collagen that is replaced during remodeling → Type III
Collagen that replaces type III during remodeling → Type I
Ref: Bailey & Love 26/e + Greenfield's surgery 5/e

Important points regarding Iron:

- 10% of dietary iron is absorbed
- Ferrous form much better absorbed
- Absorption enhanced by Vitamin C and gastric acid
- Decreased by ppis, achlorhydria
- Transfer Mechanism for Iron across the placenta (to fetus) by Endocytosis
- Total body iron 4gm
- Total iron content of adult female 2gm
- Total iron content of adult male 6gm
- Iron requirement in pregnancy 800mg
- Calcium requirement in pregnancy 1200mg
- Hb contains 70%of iron
- Ferritin and hemosiderin 25%
- Myoglobin4%
- Plasma iron 0.1%
- Transport in plasma as ferric form bound to transferrin.

Taut Hb T Hb low affinity for oxygen. Relaxed HB or R Hb high affinity for oxygen.
Some important facts related to Lipoproteins that might help
Lipoprotein and their sources
Chylomicron → Intestine
VLDL → Liver
LDL → VLDL
HDL → Liver & Intestine
Lipoprotein with highest TG
Chylomicron > VLDL > LDL > HDL
Lipoprotein with highest Cholesterol
LDL > VLDL > HDL > Chylomicron

Lipoprotein with highest protein:
HDL > LDL > VLDL > Chylomicron
Lipoprotein with highest phospholipids:
HDL > LDL > VLDL > Chylomicron
Main DELIVERY functions of Lipoproteins:
Chylomicron → Transport Exogenous TGs from GUT to adipose and muscle cells
VLDL → Transport Endogenous TGs from Liver to adipose and muscle cells
LDL → Transport Cholesterol from Liver to peripheral tissues
HDL → Transport Cholesterol from periphery to liver
Drugs that best lower TGs:
Fibrates > Niacin > Statins

Drugs that best lower LDL cholesterol
Statins > Ezetimibe > Bile Resins > Niacin
Drugs that best raise HDL:
Niacin > Fibrates > Statins > Fish oil
Chylomicron and its remnant are taken as absent after a fasting of 12 hrs:
Best predictor of FUTURE MI or ACS IN decreasing order
HsCRP (Highly sensitive CRP) > TC/HDL ratio > Apo-B/Apo-A ratio > LDL > Non-HDL (TC - HDL) > HDL
Rate limiting enzymes:
Cholesterol synthesis _____HMG CoA reductase
Ketone body synthesis _____HMG CoA synthetase
Krebs cycle_____Isocitrate dehydrogenase
Catecholamine synthesis ____ Tyrosine hydroxylase
Glycolysis_____ Phosphofructokinase
Gluconeogenesis _____ Pyruvate carboxylase
Bile acid synthesis ____7 alpha hydroxylase
Fatty acid synthesis _____ Acetyl CoA carboxylase

Important Points to Remember in Biochemistry
Miscellaneous # Vitamins

Vitamin A used to treat Acne and measles
Vitamin A used to treat DIC in acute promyelocytic leukaemia
Toxicity leads to pseudotumor cerebri, hepatotoxicity.
In pregnancy leads to cleft palate of new born
Vitamin E deficiency leads to features similar to B12 deficiency such as neurologic symptoms but there is no Megaloblastic anaemia instead there is haemolytic anaemia and muscular dystrophy.
B2 deficiency magenta tongue
B5 deficiency burning feet syndrome
B12 deficiency -Red beefy tongue
B3 deficiency pellagra
Carcinoid syndrome leads to niacin deficiency
FFP and vitamin K used to treat Warfarin toxicity
Essential fatty acids are collectively called Vitamin F
Vitamin B7 is called Vitamin H

Vitamin deficiencies in Different Conditions
Alcoholics = Folate and Thiamine.
Smoking = Vitamin C due to used up by FR in smoke.
New born = Vitamin K due to sterile gut. Because MC source of Vitamin K is gut bacteria.
Hospitalized Patients = Vitamin K > Biotin. Because of antibiotics use that kills gut bacteria.
Renal Failure = Vitamin D. Due to failure of 1 alpha hydroxylation.
Rice as staple diet = B1 Deficiency. That's why it has been enriched with B1 in some countries.
Pernicious Anaemia = Autoimmune atrophic gastritis = B 12 Deficiency.
Colostrum (Breast milk up to 4 days) = Deficient in Vitamin D.
Breast milk = deficient in D, C and pantothenic acid.
Goat milk = Deficient in Vitamin B6, Folate.
Cow milk = deficient in Vitamin A, C, D.
Post-menopausal women= Deficient in vitamin D (400 IU daily intake recommended).
Women strict vegetarian = B12 Deficiency in her and her baby if pregnant or not.
Pregnant lady = Folate deficiency. Because of its more excretion due to increased GFR and Fetal tissue growth consumption.
Pregnant lady with alcohol consumption = MC Vitamin Deficiency = Folate Increased NTDs risk.

People having just maize their Staple diet = B3 Niacin deficiency = risk of pellagra, diarrhoea, dementia, dermatitis.
Celiac disease involves = Jejunum mostly = So Folate deficiency.
Crohns disease = Involves Ileum = So B12 deficiency.
Terminal ileal resection = B12 & Bile salts deficiency = Osmotic diarrhoea and increased water loss and bile salts (Ganong).
Cystic Fibrosis = ADEK fat soluble vitamins deficiency.
Total pancreatectomy = ADEK Deficiency.
Alcoholics = MC deficiency of Mg.

Important intermediate filaments and Tumor Markers
Desmin → Muscle marker
Keratin → Epithelial marker
Vimentin → Mesenchymal marker
Neurobibrillin → Neuron marker
GFAP → Oligodendrocyte
S100 → Melanoma
Chromogranin or 5HIAA → Carcinoid
Neuron specific enlace → Small cell cancer
Blue cells are present in Ewing + Medulloblastoma and kulchitsky cells of small cell lung cancer
Epithelial cell junction:
► Cell- Cell Binding → Cadherin's
► Cell-Cell binding (Desmosome) → Desmocollin & Desmogleins
► Belta Desmosomes → E-Cadherins
► Cytoskeleton - ECM → Integrins
► Cell-Cell Desmosome → Cadherins
Think of *Connexins*/ Connexons when # Gap Junctions are in Question
Think of Occludin, Claudin, Zonulin & Catenin → When # Tight Junctions* are in question.
Cell to Basement membrane # Hemidesmosome ✓
Cell to cell # Desmosomes ✓
About RNA
tRNA → Tiny ✓
mRNA → massive ✓
rRNA → Rampant ✓ (Abundant)
ECM & cytoskeleton communicate across the cell membrane = Integrin's

The extracellular matrix and the cytoskeleton communicate across the cell membrane through which of the following?
Proteoglycans
Integrin's
Cadherin's
Intermediate filaments
Microtubules
Ans: B

Cytoskeleton connected to ECM through:
Intermediate filaments
Cadherins
Proteoglycans
Integrins
Ans: D

Which structure binds cytoskeleton with ECM?
Proteoglycans (Wrong)
Intermediate filaments
Integrins
Ans: C

ECF connected to cytoskeleton:
Proteoglycan
Integrin
Cadherin
Intermediate filament
Ans: B

Most abundant intracellular protein # Actin ✓
Most abundant protein in human body # Collagen✓

BCQs

Two siblings with osteogenesis imperfecta, but their parents are normal. Mechanism of inheritance is:
Anticipation
Genomic imprinting
Germ line mosaicism
New mutation
Ans: C

Autosomal recessive differentiates from dominant:
Heterozygous
More in male
More in female
Disease present as 1 out of 4 children
Ans: D

Difference b/w autosomal dominant and recessive?
Complete penetrance
Its expressed in heterozygous state
Ans: B

Father autosomal dominant, mother normal, what is true?
50% children will be heterozygous
25% children will be diseased
One of the parents was diseased
Ans: A

Autosomal dominant is different from autosomal recessive:
Only male carrier
Complete penetrance is common
Heterozygous is affected
Only female affected
Ans: C

Rh negative mother married to homozygous Rh positive:
All Rh +ve children
All Rh –ve children
25% offspring will be Rh –ve
All homozygous positive
50% Rh +ve 50% Rh –ve
Ans: A

Rh incompatibility occurs in mother if she has:
Rh -ve fetus
Rh +ve fetus
Ans: B

A pregnant lady Rh positive and husband Rh negative. She has come for advice. How will you counsel them?
Hemolytic disease of new born may occur
Antigen Antibody complexes in post natal life
Antigen may transfer to mother's circulation
No need to worry
Ans: D

Common cause of 1st trimester miscarriages is:
Trisomy
Monosomy
Aneuploidy
Tetraploidy
Ans: C

Most sensitive sonological indicator for aneuploidy is:
Gestational sac volume
Crown-rump length
Nuchal translucency
Serum B HCG level
Ans: C

T Haemoglobin Taut haemoglobin (tense) low affinity For Oxygen✓
R Haemoglobin Relax has more affinity for oxygen✓

Basement membrane will repel by which negative charge due to:
Laminin
Fibronectin
Type 4 collagen
Heparan sulphate
Ans: D

Alcohlic man presented e hypoglycaemia. Initial treatment:
IV dextrose
Thiamine
Oral glucose
Ans: B

Alcoholic patient, encephalopathy:
Niacin
Thiamine
Methocobalmin
Riboflavin
Ans: B

Thiamine → Necessary for carbohydrate metabolism
Biotin → Necessary for fats metabolism
Riboflavin → Necessary for protein metabolism

Ophthalmoplegia is caused by:
Niacin
Thiamine
Pyridoxine
Pantothenic acid
Ans: B

Dermatitis, Alopecia and adrenal insufficiency seen in which of following vitamin deficiency?
Pantothenic acid
Pyridoxine
Niacin
Riboflavin
Ans: A

Severe deficiency of which vitamin lead to malignant carcinoid syndrome:
Pantothenic acid
Pyridoxine
Niacin
Riboflavin
Ans: C

Pellagra occurs in population dependent on:
Wheat
Rice
Maize
Milk
Ans: C

Magneta tongue is seen in deficiency of which vitamin? Riboflavin B2 Ciliary movement caused by:
Microtubule
Dynein
Actin and dynein
Myosin and microtubules
Microtubules and dynein
Ans: E

Normal form of DNA:
A form
B form
Z form
Ans: B

24. Factor related to coronary disease and inhibits fibrinolysis?
HDL - C
LDL - C
Lipoprotein
Ans: B

Which of the following is correct about DNA?
DNA is single stranded
Euchromatin is transcriptionally active
Heterochromatin is active
Euchromatin is inactive
Ans: B

Explanation: Euchromatin is a lightly packed form of chromatin enriched in genes and is active transcriptionally.

High Triglycerides is in:
HDL
Chylomicron remnants
VLDL
LDL
Ans: C

A person is fasting; circumference of mid arm is decreased after one month due to:
Decreased protein of body
Decreased fat of body
Decreased cholesterol of body
None of above.
Ans: A

What is the end product of Purine Metabolism?
Urea and water
Uric acid
Glucose
Water and ammonia
Ans: D

During conversion of fibrinogen to fibrin. What will be detected in blood?
Fibrinopeptidase
Plasmic
TXA2
Trans peptidase

Ans: A

Which one is essential Fatty Acid?
Plasmatic acid
Linoleic acid
Saturated Fatty acid
None of above.

Ans: B

Following is not phospholipid:
Cephalin
Lysolecithin
Lecithin
Plasminogen

Ans: D

Which of the following is not a post transcriptional modification of RNA?
Splicing
5 Capping
Polyadenylation
Glycosylation

Ans: D

Highest magnesium stores are present in:
Bone
Soft tissues
Cartilage
Ligaments.

Ans: A

Highest cholesterol content is present in:
Chylomicron remnants
LDL
VLDL
HDL

Ans: B

High fiber diet benefit is:
Causes diarrhea
Increase predisposition to skin cancer
Increase predisposition to lung cancer
Increase cholesterol excretion from the body

Ans: D

Wheat is a rich source of?
Vitamin C
Thiamine
Riboflavin
Vitamin A

Ans: B

In dividing cells, spindle is formed by:
Ubiquitin
Tubulin
Laminin
Keratin

Ans: B

Person taking carbohydrates in diet must also take:
Vitamin B1 (thiamine)
Vitamin B2
Vitamin b6
Pyridoxine

Ans: ?

Explanation: B1 (thiamine) is used for glucose metabolism, Ribiflavin (B2) is used for protein metabolism.

Following amino acid is not synthesized in body:
Methionine
Glutamate
Alanined
None of above

Ans: A

Explanation: It is known as essential amino acid and should be taken as diet.

Chylomicrons contains:
Fatty acids with fat soluble vitamins
Only fatty acids.
Only triglycerides
None of above.

Ans: A

Note: Content of fat in male 15% in female 21%.

Ketogenic amino acids are:
Lysine and leucine
Proline and lysine
Threonine and cystine
Thiamine and threonine

Ans: A

Which of the following is not stimulated by Insulin?
Glycolysis
Glycogenesis
Lipogenesis
Ketogenesis

Ans: D

42. Oxidation of odd-chain fatty acids produces:
Succinyl CoA
Propionyl CoA
Acetyl CoA
Malonyl CoA.

Ans: B

43. Acetyl coA can be directly converted to all except:
Glucose
Fatty acids
Cholesterol
Ketone bodies.

Ans: A

44. In Vitamin A deficiency, most important finding is:
Xerophthamia
Phenylalanine

Dopamine
Norepinephrine.

Ans: A

Regarding miscelle
Absorbed along lipid from intestine
Carry product of triglyceride
Digestion to small intestine
Micelles bring the products of lipid digestion into contact with the absorptive surface of the intestinal cells. Then, fatty acids, monoglycerides, and cholesterol diffuse across the luminal membrane into the cells.

About Glycerol:

Is contained in micles and align along border of intestine and is absorbed
Is not a component of lipid digestion?
Is hydrophilic and does not form miscles
Never reaches the intestine and digested in mouth by lingual lipase.

Explanation: Glycerol is hydrophilic and is not contained in the micelles.

45. Micelles formation is important for all except?

Vitamin K
Cholesterol
Monoglycride
Nicotine acid

Ans: D

46. Fat is transported from small intestine as:

Mixed micelles
Chylomicrons
Free fatty acids

Ans: B

47. Deficiency of bile salts cause:

Decrease micelle formation
Secretary diarrhoea.

Ans: A

48. Micelle formation is necessary for the intestinal absorption of:

Bile acids
Vit. B12
Galactose
Vit. D
Glycerol

Ans: D

Explanation: Micelle helps in Absorption of fatty acid and fatsoluble vitamin, Chylomicrons helps in transport of fats and fat soluble vitamins.

49. Zinc is necessary in:

Cellular oxidation
Glucose oxidation
B12 formation
Carbonic anhydrase

Ans: D

50. 10 year old child with lipid accumulations in skin of extensor surface of forearms. Blood Cholesterol = 800 history of same disease in mother and grandmother. Mutation in gene of protein which causes cholesterol transport and metabolism:

LDL receptor
HDL receptor
APOE
Cholesterol hydrolase.

Ans: A

51. Genetic diseases have common pathology related to:

DNA
Messenger RNA
Transfer RNA
Proteins.

Ans: A

Protein Synthesis is done in the sequence of:

mRNA → Cytoplasm → Ribosome → tRna → AminoAcids
t-RNA → Cytoplasm → Ribosome, m-RNA
Amino acids → Cytoplasm → mRNA → tRNA.

52. Fatty Acids are transferred from adipose to liver in the form of:

Chylomicrons
HDL
LDL
VLDL

Ans: B

53. Elasticity of the corneal layer of skin is due to the presence:

Histidine
Keratin
Lysine
Cysteine

Ans: B

54. Woman presents with corneal vascularization and fissures at corners of mouth. Which of the following will be absent?

Riboflavin
Niacin
Biotin
Thiamine

Ans: A

55. Cheilosis seborrhic dermatitis corneal vascularization what is deficient?

Niacin
Thiamine

Riboflavin

Ans: C

56. From which metabolism most active gluconeogenesis is resulted?

Fatty Acids
Protein
Cholesterol
Glycogen

Ans: B

57. Milk is notoriously deficient in:

Vitamin C
Iron
Riboflavin
Pantothenic acid

Ans: A

58. Regarding L & D sugars:

D sugar has - OH on right
L sugar has - OH on right
D sugar has - OH on left
D sugar has no – OH

Ans: A

59. Regarding Vitamin K:

Is a water soluble vitamin
Produced by intestinal bacteria
Present in large amount in human and cow's milk
None of the above.

Ans: ?

60. The techniques used for detection of variations in DNA sequence and Gene expression is:

Northern Blot
Southern Blot
Western Blot
Microarray

Ans: D

61. Prolonged use of paraffin leads to deficiency of which vitamin?

Thiamine
Biotin
Vitamin A
Vitamin B

Ans: C

Explanation: Paraffin (drug), a very highly refined mineral oil used in cosmetics and for medical purposes & its excessive use causes Vitamin A deficiency.

62. Degradation of deoxynucleic acid releases:

Phosphoric acid
Ribose
Uracil.

Ans: A

63. Which of the following represents an irreversible step in glycolysis?

1,3 – bisphosphoglycerate to 3 - phosphoglycerate
Fructose 6 – phosphate to fructose 1,6 - bisphosphate
Fructose 1,6 – biphosphate to glyceraldehyde's 3 – phosphate
Glucose 6 – phosphate to fructose 6 – phosphate
Glyceraldehyde 3 – phosphate to 1, 3 – bisphosphoglycerate.

Ans: B

64. Vitamin B12 and folic acid supplementation in megaloblastic anaemia leads to the improvement of anaemia is due to:

Increased DNA synthesis in bone marrow
Increased haemoglobin production
Erythroid hyperplasia
Increased iron absorption.

Ans: A

65. Transketolase activity of RBCs can be used to judge deficiency of:

Niacin
Thiamine
Biotin
Folic acid.

Ans: B

66. Which amino acid deficiency causes cell injury?

Glycine
Tyrosine
Adenine
Proline

Ans: A

Explanation: It is a required component in so many functions of the body that a deficiency can result in a wide cellular injury.

67. High energy bond found in:

Glucose
Galactose
Long chain fatty acid
Protein.

Ans: C

68. Vitamin required for Fatty acid synthesis:

Biotin
Thiamine
Riboflavin
Pantothenic acid.

Ans: A

69. Regarding glycolysis most appropriate:

Pyruvate is end product of aerobic and lactate of anaerobic metabolism
Reversible process
Pyruvate is end product of anaerobic metabolism
None of above.

Ans: A

70. Oxidative breakdown of glucose during glycolysis generates:

1 pyruvate
2 pyruvate
Lactic acid

Ans: B

71. The product of glycolysis in RBC's is:

NADPH
Lactate
Pyruvate
CO_2

Ans: B

72. Step common in both glycolysis and gluconeogenesis:

Fructose 1-6phosphate to fructose 6 phosphate
Glucose 6 phosphate to fructose 6 phosphate

Ans: A

73. What is glycogen composed of?

Animal Polysaccharide
Animal heteropolysaccharide
Animal Homopolysaccharide
All of these.

Ans: A

74. The protein rich in basic amino acids, which functions in the packaging of DNA in chromosomes is?

Histone
Collagen
Hyaluronic acid binding protein
Fibrinogen.

Ans: A

75. What is end product of glucose metabolism in the presence of oxygen?

Lactic acid
1 molecule of pyruvate
2 molecule of pyruvate
None of above.

Ans: C

76. Lactic acidosis is caused by deficiency of Vitamin:

Riboflavin
Thiamine
Niacin
Pantothenic acid.

Ans: B

77. DNA replication occurs in which phase?

Prophase
Metaphase
Anaphase
Interphase

Ans: D

78. Non-essential amino acid takes alpha group from:

Oxaloacetate
Glutamine
Pyruvate dehydrogenase
Pyruvate.

Ans: B

79. Female, there is abnormal metabolism of amino acid. Which of the following amino acid will appear in urine?

Alanine
Tyrosine
Tryptophan
Lysine

Ans: C

Explanation: Recurrent **Renal Stones** associated which Amino acid Abnormality **____COLA (Cystei**ne, Ornithine, Arginine**, Lysin**e**).**

Abnormal Metabolism of amino acids which will appear in urine_____**Tryptophan.**

Which amino acid Protect cell membrane from injury_____**Glycine.**

80. Highest energy content is present in:

Fats
Proteins
Carbohydrates
Vitamins and minerals.

Ans: A

81. Which metabolite of fatty acid metabolism enter into Krebs cycle?

Acetyl Co-A
Ketones
Acyl co-A
Peptidase A

Ans: A

82. Amount of energy liberated on metabolism of fats is:

9.1 kcal
4 kcal.
5 kcal
10 kcal

Ans: A

83. Dietary fibers contain:

Collagen
Peptidoglycans
Pectinis
Ammonia.

Ans: C

84. The richest source of vitamin D:
Whole milk
Butter
Margarine
Liver cord oil

Ans: D

85. Most common type of hyperlipidemia:
Type 1
Type 2
Type 3
Type 4

Ans: D

Explanation: Familial hypercholesterolemia (Type II) is the most common hyperlipidemia in children. Hypertriglyceridemia (Type IV) is the most frequently found hyperlipidemia in adolescents and adults.

86. What is the predominant isozyme of LDH in cardiac muscles?
LD-1
LD-2
LD-3
LD-5

Ans: A

87. What is the normal caloric value for an adult male?
70KCAL/day
25 to 30 KCAL/Day
15-20 KCAL/Day
35 to 40KCAL/Day

Ans: B

88. Structure of carbohydrates can be well elaborated as Complex branched structure:
Have 1 6 linkage in chain and 1 4 in branches
Have 1-4 linkage in chain and 1-6 in branches
Have 1-6 linkage in chain and 1-4 in branches

Ans: B

89. Which of the following would you not expect to be raised in an acute phase response?
Fibrinogen
Transferrin
Caeruloplasmin
CRP

Ans: D

90. Phenylalanine is the precursor of all the following except:
Tyrosine
Epinephrine
Thyroxine
Melatonin

Ans: D

Explanation: Melat**onin** is produced by Serotonin.

91. Immediate precursor of epinephrine:
Tyrosine
Phenylalanine
Dopamine
Norepinephrine

Ans: D

92. Most drugs advised to be taken after meals:
To increase its bioavailability
Reduce gastric upset
Good compliance
Good bioavailability

Ans: B

93. Shortening of chromosome in mutation occurs. Enzyme responsible is:
Transcriptase
Telomerase
Transpeptidase
Phospholipase

Ans: B

94. Creatinine phosphokinase is absent in:
Brain
Muscle
Liver
Myocardium

Ans: C

95. Amino acid required for formation of neurotransmitter which is deficient in Parkinson disease?
Tyrosine
Histamine
Alanine
Threonine

Ans: A

96. Has negative coronary risk factor:
HDL
LDL
IDL
VLDL

Ans: A

97. Minerals are least found in:
Pulses
Cereals
Tubers
Green Vegetables

Ans: C

98. Which is not a derivative of Tyrosine?
- TSH
- Adrenaline
- Nor adrenaline
- Dopamine

Ans: A

99. Highest Cholesterol content is present in which of the following:
- White meat
- Red meat
- Milk
- Egg

Ans: D

100. What are sources of Nitrogen in urea cycle?
- Aspartate and Ammonia
- Glutamate and Ammonia
- Arginine and Ammonia
- Uric Acid

Ans: A

101. Which enzyme can be deficient in case if Hepatic glycogen is increased in a patient with normal liver structure and there is no increase in serum glucose after giving fructose?
- Fructokinase
- Glucose 6 Phosphate
- Hexokinase
- None of the above

Ans: B

102. Dry heat kills the bacteria by:
- Coagulation of proteins
- Cell lysis
- Free radical formation
- Oxidation

Ans: D

Explanation: Dry heat_____ oxidation, moist heat _____coagulation of protein.

103. Glycolysis in RBC occur through:
- Anaerobic glycolytic (Embden-Meyerhof) pathway
- Aerobic pathway
- Cyclooxygenase pathway
- Glucose 6 phosphatase pathway

Ans: A

104. 30-year-old male is on total parenteral nutrition for the last 1 month develops scaling dermatitis and alopecia, the condition is most likely to be due to deficiency of:
- Linoleic acid
- Zinc
- Riboflavin
- Magnesium

Ans: B

105. Dermatitis, Enteritis, Alopecia, Adrenal insufficiency can occur due to which Vitamin deficiency?
- Pantothenic acid (Vitamin B5)
- Biotin
- Ascorbic acid
- Vitamin D

Ans: A

106. Which statement is true about DNA?
- Double stranded in which two strands are antiparallel to each other
- A single turn of DNA is 2nm
- Can exist as helix in single stranded form as well as in Double stranded form
- None of above

Ans: A

107. Amino acid which contain sulphur is:
- Arginine
- Lysine
- Tryptophan
- Cystine

Ans: D

Examples: Include, Cysteine, Methionine, Homocysteine, Taurine

Remember by mnemonic "CMH T".

108. Which protein is associated with obesity?
- Fibrin
- Leptin
- Lecithin
- Taurine

Ans: B

109. Which one of the following lipoproteins has highest protein Content?
- HDL
- LDL
- VLDL
- IDL

Ans: A

110. Egg contains protein avidin. Eating raw eggs will lead to its deficiency which causes?
- Increase transamination
- Decrease phosphorylation
- Decrease carboxylation
- Decrease coA formation

Ans: C

Explanation: Avidin bin**ds B7 (biotin**). Reducing its levels. Thus, decrease the cofactor required for carboxylation reactions.

111. Avidin is present in:

Cow's milk
Raw egg white
Green leafy vegetables
Carrots
Turnips.

Ans: B

112. Total parenteral nutrition:

Amino acids are given in D-isomer form
All caloric requirement can be fulfilled by glucose only
Decrease chances of infection via enteral nutrition
Cause hypoglycaemia

Ans: C

Explanation:

A is wrong as they are in L isomer form not D isomer.
B wrong as they don't fulfill.
C is right as enteral feed has less chances of infection as compared to parenteral.
D is wrong cause hyperglycaemia.

113. The process promoted by ascorbic acid in the process of wound healing and collagen formation is:

Hydroxylation of Proline
Triple-Helix Formation
Disulphide Bodies
Chain Association

Ans: A

114. Pyruvic acid is used as intermediate in which step of cell metabolism:

Carbohydrate to acetyl CoA
Glucose to acetyl CoA
C Acetic acid to acetyl CoA.

Ans: B

115. One of the following is an Essential fatty acid:

Oleic acid
Linoleic acid
Stearic acid
Stearic acid

Ans: B

116. Glycolysis Function is:

Converts hexoses to pyruvates
Convert pyruvate to hexoses
Convert hexoses to maltose
Convert hexoses to dipeptides.

Ans: A

117. Mitochondrial liver enzyme is:

SGOT (AST)
SGPT(ALT)
GGT
5' Nucleosidase.

Ans: A

118. How many calories are in 1 gram of protein?

4 calories
8 calories
5 calories
9 calories

Ans: A

119. Which contains the least amount of essential fatty acids?

A-Coconut oil
b-Fish oil
C-Sunflower oil
D-Vegetable oil

Ans: A

120. What is caused by Thiamine deficiency?

Peripheral Neuropathy
Pellagra
Cheilosis
Dermatitis

Ans: A

121. Humans most easily tolerate a lack of which of the following nutrients?

Protein
Lipids
Carbohydrates
Calcium
Iodine

Ans: C

Reference: Chatterjee BCQs.

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Some Facts About Hodgkin's Lymphoma

- Commonest HL → Nodular Sclerosis HL
- Least common HL → Lymphocyte depleted HL
- HL with Best Prognosis → Lymphocyte Predominant HL
- HL with worst Prognosis → Lymphocyte depleted HL
- Commonest with Mediastinal Involvement → Nodular Sclerosis HL
- Commonest nodes affected → Cervical LNs
- Most Aggressive HL → Lymphocyte depleted HL
- HIV commonest association with → Mixed Cellularity HL
- EBV Commonest association with → Mixed Cellularity HL
- Commonest mode of Spread → LN to LN through lymphatics
- Most specific marker for RS cells → PAX-5 > CD 30 > CD 15
- Most common chemo regimen → ABVD
- Commonest secondary tumor in HL → Acute Leukemias
- Commonest Type of leukemia seen after HL Rx→ AML
- Some facts about Renal threshold & corresponding plasma conc of Glucose + Tmax
- Minimum Conc of Glucose in BLOOD for it to appear in urine → 200mg /100 ml or 200mg /dl
- Minimum Filtered load (AKA Renal Threshold) for Glucose to appear in Urine → 250 mg/min
- Transport max → when all nephrons have reached their maximum capacity to reabsorb glucose → 375 mg / min
- While Solving MCQs Regarding Iron Deficiency Anemia some Facts

For Iron deficiency anemia:

- Most specific / Gold standard test → Bone marrow biopsy with iron stain (perussian blue stain)
- Most sensitive test (in order) → Serum transferrin receptor to log index of ferritin ratio >> serum transferrin receptor assay (serum transferrin receptors) >> serum ferritin. So while solving MCQs, BM Biopsy will be the first choice, if its not there then go for Transferrin receptors (not TIBC or transferrin alone) then serum ferritn.

Some facts about Hematology

- Least Mature but recognizable erythrocyte precursor cell → Pro-Erythroblast or Simply pro-Normoblast
- First stage for Hb production → Pro-Erythroblast or pro-Normoblast
- Max -Ribosome → Basophilic erythroblast
- Earliest Stage when nucleoli become invisible on microscope → Basophilic Erythroblast
- Earliest Stage at which Hb can be detected → Polychromatophilic Erythroblast (not the stage for earliest Hb production, that would be pro-Normoblast)
- Stage with maximum complement of Hb → Orthochromatic Erythroblast (Cell of late normoblast), (Reticulocyte is wrong for max Hb) At this very same stage of orthocromatic Erythroblast pyknosis of nucleus occurs at later half
- First stage after nuclear extrusion → Reticulocyte
- First organelles to disappear in Reticulocyte → Mitochondria
- Last organelles to disappear in Reticulocyte → Ribosomes
- First stage for RBC to enter capillary → Reticulocyte

About Viral Hepatitis

- Most common cause of epidemics of viral hepatitis → Hep E
- Most common cause of chronic Viral Hepatitis→ Hep C
- Most common cause of Liver Cirrhosis → Hep C
- Most common Viral Hepatitis causing HCC → Hep B
- Most Common cause of Hepatitis carriers / Carrier State → Hep B
- Most common hepatitis associated with transfusion → Hep B
- Most common cause for fulminant hepatitis → Hep D
- Most lethal Hepatitis Virus → Hep D (Coinfection)
- Most Lethal Viral Hepatitis in Pregnancy → Hep E

CARDIAC TUMOURS

1) Most common tumor of heart: Metastases (most common primary is lung > breast)

2) MC primary tumor of heart:

a) Myxoma in adults

b) Rhabdomyoma (not sarcoma) in children

3) MC primary malignant tumor of heart in:

a) Children--Rhabdomyosarcoma.

Adults → Angiosarcoma

Hepatic – Neoplasm

- Most common hepatic neoplasm --- Metastases (most common primary is -- Colorectal carcinoma)
- Most common benign hepatic neoplasm--cavernous hemangioma.
- Most common primary malignant neoplasm in adults --- Hepatocellular carcinoma (=Hepatoma).
- Most common primary malignant tumour in pediatric age group---Hepatoblastoma.

Medullary Thyroid Carcinoma is mc A/W MEN-2A >B

Medullary Thyroid Ca is more aggresive and poor prognosis with MEN 2B > 2A

Rabies diagnosis

Pathologically rabies is defined by presence of intracytoplasmic negri bodies in:

A) Hippocampus

B) Brain stem and

C) Cerebellum (purkinje neurons) (Most common site)

Men-1 Syndrome

1) MC tumour --- Parathyroid adenoma

2) MC pancreatic tumour ---- insulinoma

3) MC enteropancreatic tumour---- gastrinoma

4) Most common endocrine abnormality---- Primary hyperparathyroidism

Trinucleotide repeat disorders

1. Huntington's Disease (Chromosome 4 (HTT gene) CAG)
2. Myotonic Dystrophy (Chromosome 19 (DMPK gene) CTG)
3. Fragile X syndrome (Chromosome X FMR1 gene) CGG)
4. Friedrich's Ataxia (Chromosome 9 (Frataxin gene) GAA)

Some important lesions and associations

- Major affected of the condition has been given below.
- Athetosis Globus pallidus (guyton)
- Chorea / Flinking movements → Caudate nucleus
- Writhing movement → Striatum → Mainly Putamen
- Torsion Dystonia → Caudate + Putamen
- Hemiballismus / Flailing Movements→ Contralateral Subthalamic Nucleus
- Intention Tremor → Cerebellum
- Ballism → C/L Subthalamic nucleus
- Wilson → Lenticular nucleus → Particularly putamen
- Parkinson is due to neuronal degeneration in → Substantia nigra and, to a lesser extent, in the Globus Pallidus, Putamen, and Caudate nucleus
- Huntington is due to spontaneous outbursts of globus pallidus and substantia nigra activity due to loss of inhibition of GABAergic Neurons due Lesion in Neostriatum (putamen & Caudate) that results in loss of cell bodies of gaba secreting neurons (in neostriatum not GP or SN)

Best predictor of future Coronary artery disease or myocardial infarction (in descending order)

1) HsCRP (highly sensitive C Reactive Protein)

2) "TC (total cholesterol)/HDL " ratio

3) "Apo-B/ Apo-A" ratio.

4) LDL

5) Non HDL (Total cholesterol -HDL)

6) HDL

First Aid Tests of All System

Last Days Quick Review Tests.

If You Do These Tests Along with Previuos

Chapters. You Will Have No Need of Revising First Aid

ABDOMEN ANATOMY

- Cutaneous nerve supply to the anterior abdominal wall is derived from the?? Anterior rami of lower six thoracic and first lumbar nerves
- Which dermatome is located over xiphoid process? T7
- The lymphatic below the umbelicus drain into? Superficial inguinal node
- Colles facia is is which part of body? Perinium
- The cremaster muscle is derived from which muscle fibre? Internal oblique muscle fibre
- Rectus sheath is formed by which muscles? External oblique , internal oblique and transversus abdominis muscle
- Anterior abdominal wall of rectus sheath is firmly attached to --------- of rectus abdominis muscle? Tendinous intersection
- Conjoint tendon is formed by which muscles? Internal oblique and transverse abdominis
- The femoral sheath is formed by??? Fascia transversalis and fascia iliaca
- Inguinal ligament is formed by aponeurosis of? External oblique muscle
- The length of inguinal canal is?? 1.5 inch (4 cm)
- The deep inguinal opening is opening in? Fascia transversalis
- The external spermatic fascia is attached to margins of which ring? Superficial inguinal ring
- Pyramidalis muscle is supplied by which nerve? 12 thoracic nerve
- Cremaster muscle is supplied by which nerve? Genital branch of genitiofemoral nerve
- Action of cremaster muscle is ?? Retract testis
- Cremasteric fascia derived from?? Internal oblique muscle
- ------ is the closed sac invaginated from behind the testis? Tunica vaginalis
- Gubernaculum plays an important role in? Descent of testis
- Outer fibrous capsule of testis is called? Tunica albuginea
- Epididymis length is approx ?? 6 meters
- testicular artery is branch of? Abdominal aorta
- Left Testicular vein drains into? Left renal vein
- Lymph draining from testis is to ? Para aortic lymph nodes
- Para aortic lymph node are at the level of? First lumbar vertebra
- The inferior epigastric artery arises from? External iliac artery
- Superficial epigastric artery is branch of? Femoral artery
- The anastomoses between lateral thoracic vein and superficial epigastric vein is called??Thoracoepigastric vein
- The communication between greater sac and lesser sac with one another through? Epiploic foramen
- Greater omentum connects the greater curvature of stomach with? Transverse colon
- Which ligament connects the stomach to the hilus of spleen with? Gastrosplenic ligament
- Superiorly of Epiploic foramen is which part of liver? Caudate lobe of liver
- Spaces between diaphragm and the liver is?? Sub phrenic spaces
- Parietal peritonium in pelvis is mainly supplied by? Obturator nerve
- Visceral peritoneum is supplied for?? Stretch only
- Most tubular part of stomach? Pylorus
- Esophagus enters the stomach at the ? Cardiac orifice
- Short gastric arteries are derived from? Splenic artery
- All lymph nodes from the stomach eventually passes to? Celiac nodes
- Deudonum is of which alphabetic shape? C shape
- First part of deudonum is at the level of which vertebra? L1
- Ligament of trietz attached to which part of deudonum? 4th part
- Inferior pancreatodeudenal artery is branch of ??? Sup mesenteric artery
- Length if ilium is?? 3.6 m
- Appendix attachéd to which surface of cecum? Posteromedial
- Appendicular artery is branch of?? Iileocolic artery ref (RJ LAST)
- Left colic flexure is held up by? Phrenicocolic ligament
- Distal one third of transverse colon supplied by which artery? Left colic artery branch of inferior mesenteric artery

- Length of transverse colon is? 38cm
- Sigmoid colon is continuous with rectum in front of which vertebra? 3rd sacral vertebra
- Large intestine is retro peritoneal except? Transverse and sigmoid
- colon
- Fatty tags attached to the wale of large intestine is called? Appendices epiplocae
- Right lobe is divided into quadrate an caudate lobe by? Fall bladder
- Ports hepatis is on which surface of liver? Posteriinferior
- Ligamentum Teres is the fibrous remains of? Umblical vein
- Ligamentum venosum is the fibrous remains of ? Ductus venosus
- Gall bladder has a capacity of approximately? 30 ml
- Cystic artery is branch of? Right hepatic artery
- Gall bladder contracts In response to hormone?? Cholecystokinin
- Bile duct is formed by the union of? Cystic duct and common hepatic duct
- The circular smooth muscle of ampulla of Vater called ? Sphincter of oddi
- Main pancreatic duct open in which part of deudenum? Second part
- Largest single mass of lymphoid tissue is? Spleen
- Artery of foregut is? Celiac artery
- Name terminal branches if celiac trunk? Left gastric artery, splenic artery and hepatic arteries- I
- The policeman of abdomen is? Omentum
- Posterior boundary of foramen of Winslow Is formed by ?? Inferior vene cava
- Inguinal canal of female contains? Round ligament and Ilioimguinal nerve
- Internal spermatic fascia is derived from? Transversalis fascia
- In inguinal hernia , posterior wall os formed by? Conjoint tendon
- Iliac crest marks the level of which lumbar vertebral body? L4
- Nerve supply to Pyramidalis ? Sub costal nerve
- Intermittent pain of small intestine felt at? Umbelicus
- Left gastroepiploic artery is branch of? Splenic artery
- Artery which crosses third part if deudenum? Superior mesenteric artery
- Abdominal angina is due to occlusion of? Sup mesenteric artery
- Demarcation of deudonum from jejunum is shown by? Ligament of trietz
- Major site of peptic ulcer? Deudenum
- Which part of deudenum is retro peritoneal? All except first 2cm of first part
- Blood vessels related to para deudenal fossa is? Portal vein
- Most common type of intussuception is? Ilio colic
- Parasympathetic supply of sigmoid colon is? Pelvic splanchnic nerves
- Sigmoid and descending colon drains into? Inf mesenteric nodes
- Capsule of liver is known as? Glisson capsule
- A pathologist wants to pass dye into the liver? He will reach through? Ligamentum Teres
- Weight of liver is? 1.5 kg
- Hepatic zone with least blood supply is? Zone C
- Proximal part of common bole duct is supplied by? Cystic artery
- Perinephric fat and kidney are enclosed by? Gerota's fascia
- The ascent of horse shoe shaped kidney is prevented by? Inf mesenteric artery
- Renal artery lies at the level of? L1
- Right supra renal vein drains into! Inferior vena cava
- A single kidney shows how many segments? 5
- Narrowest part of urinary bladder is? Entrance at urinary bladder
- Rt gastroepiploic artery is branch of? Gasteodeudenal artery
- Rt gastric artery is branch of? Hepatic artery
- Short gastric artery is branch of? Splenic artery
- Cystic artery is branch of? Hepatic artery
- Varicocele more common on which side? Left side
- The testis descent into scrotum is preceded by? Gubernaculum

- Length of epidudimys is? 7 meter long
- The muscularis mucosa is thickest in which part of git? Esophagous
- Enterochromaffin cells produces? Serotonin and endorphin
- Diverticulosis is most common in? Sigmoid colon
- Lumbar plexus is embedded within? Psoas muscle
- Average capacity of renal pelvis is? Less than 5 ml
- In scrotum fatty layer of superficial fascia is called? Dartos fascia
- Testicular artery arises from aorta at? L2
- Celiac artery arises from aorta at level of? T12
- Splenic artery runs along which border of pancreas? Upper
- Largest branch of lumbar plexus? Femoral nerve
- Largest branch of celiac artery is? Splenic artery
- Cremasteric artery is branch of? Inferior epigastric artery
- Which part of deudenum is longest? 3rd part
- Root of mesentey is crossed by which part of deudenum? 3rd part
- Shortest part of colon? Ascending colon
- Spleen develops from which mesogastrium? Dorsal mesogastrium
- Most posterior part of stomach? Fundus
- Gall bladder has capacity of? 30-50m

FIRST AID RESPIRATORY TEST

- Respiratory zone consists of?? Respiratory bronchioles, alveolar ducts and alveoli...
- Mucus secretion are swept out of lungs toward mouth by which cells?? Ciliates columnar cells
- Pulmonary surfactant contains?? Dipalmitoyl phosphatidylcholine
- Aspirated peanut at supine position reaches? Sup portion of right inf lobe
- Aorta at T12 Other components are? Thoracic duct and Azygous vein
- Phrenic nerve root value? C345
- important muscle in expiration? Rectus abdominus
- Kallekrien activates----? Bradykinin
- Surfactants deficit in which disease? Neonatal respiratory distress syndrome
- Vital capticity? TV +IRV +ERV
- Which part of lung has largest contribution of functional dead space? Apex of healthy lung
- Compliance defined as----??? change in lung volume in given change in pressure
- Relaxed form of HB has high affinity for O2? T
- CO has ------ time greater affinity than O2? 200
- Methemoglobinemia can ne treated with ?? methylene blue
- Fetal dissociation curve is shifted to? left
- Oxygen HB dissociation curve is sigmoid due to? Positive cooperatively
- Normal pulmonary artery pressure?? 10-14 mmHg
- Cyanosis result when deoxyhaemoglobin HB reaches??? >5 mHg
- V/Q=0 what does it means?? Airway obstruction (shunt)
- CO2 is transported in forms name them????? bicarbonate, carbaminohemoglobin, dissolved
- Bohr effect seen in ?? peripheral tissues
- Chronic hypoxia pulmonary vasoconstriction results in??? RVH
- Pulmonary embolism symptoms?? Chest pain, tachypnea and dyspnea
- Amniotic fluid emboli can lead to? DIC
- Virchow's triad?? Hypercoagubility, stasis and endothelial injury
- Barrel shape chest seen in? Emphysema
- Test for asthma?? Metha choline challenge
- Bilateral hilar lymphedanoparhy and non caseating granuloma disease? Sarcoidosis

- Which effects lower lobes?? asbestosis
- In neonatal respiratory distress syndrome therapeutic supplemental O2 can result in?? Retinopathy of prematurity
- NRDS Persistent Low O2 tension----> risk of??? PDA
- Crushmann, is spiral seen in? Asthma
- Asbestosis associated with?? Bronchogenic carcinoma and pleural mesothelioma
- Surfactant is made by -----cells??? And mostly abundant after -------- week of gestation?? Type II Pneumocytes and 35th week of gestation
- Treatment of sleep apnea??? Weight loss, CPAP, surgery
- Dull percussion notes? Pleural effusion
- Coin lesion on X-ray film?? Lung Cancer
- Lung carcinoma associated with smoking? Squamous cell carcinoma
- Spontaneous pneumothorax -- tracheal deviation which side?? Towards side of lesion
- Carcinoid tumors secretes? Serotonin
- Salt and pepper histological feature seen in? Small cell lung carcinoma
- Horner syndrome?? Ptosis, miosis and anhydrosis
- Most common cause of lung abcess? Staph aureus
- Farmer disease shows which type of hyperactivity reaction? Mixed type II/III
- Facial plethora seen in?? SVC obstruction
- In pneumothorax ?? dec tactile fremitus
- Spontaneous pneumothorax most commonly occurs because of? Rupture of apical bleb
- Name 1st generation H1 blockers? Diphenhydramine, dimenhydrinate, chlorpheniramine
- Theophylline causes bronchodilators by?? Inhibits phosphodiesterse
- Mast cell stabilizers? Chromolyn sodium
- Drug of pulmonary hypertension? Bosentan
- Dextromethorphan act on which receptors? NMDA glutaminergic receptors
- Name the transcription factor that induces production of TNF-alpha? NF-kB
- Lymphatic pleural effusion also called? Chylothorax
- Psamomma bodies seen in which lung disease? Mesothelioma
- Most aggressive lung carcinoma? Small cell lung carcinoma
- Sleep apnea breathing stops for how much time? 10 secs
- Risk factor for neonatal respiratory distress syndrome?? Prematurity, maternal diabetes, caesarean section
- Egg cell calcification of hilar lymph nodes? Silicosis
- Hypertrophic osteoarthropathy os associated with achi clung carcinoma? Adenocarcinoma of lung
- Drugs causing restrictive lung disease? Busulfan, bleomycin and amaidarone.
- What sign is present in DVT? And how we check it? Homan sign, dosriflexion of foot
- Primary pulmonary hypertension is due to inactivation of which gene? BMPR2 gene
- 1gm HB binds with = 1.34 ml O2
- Functional residual capacity?? RV+ERV
- Pain from the diaphragm can be referred to?? Shoulder
- In perfusion limited ... Diffusion can be increased only if ------- increases??? Blood flow
- Majority of blood CO2 is carried as ----- in plasma? Bicarbonate

THORAX ANATOMY

- Bones of thoracic wall consists of?? Sternum, the ribs, and the costal cartilage
- Sternum is which type of? Flat bone
- Which intervertebral discs are opposite of angle of Louis? T4-5.
- Bones of thoracic wall consists of?? Sternum, the ribs, and the costal cartilage
- Common site or bone marrow biopsy???? Body of sternum
- Name false ribs???? 8,9,10
- Which part is weakest part of rib? Angle of rib
- The cartilages of the 11 and 12 ribs end in the?? Abdominal musculature
- Which type of movement is there in costrocondral joints?? No movements

- The intercostal nerves and blood vessels run between??? Internal and innermost intercostal muscle
- Nerve supply of diaphragm? Phrenic nerve
- Which structure passes through aortic opening? Aorta, thoracic duct and Azygous vein
- Most important muscle of respiration? Diaphragm
- Caval opening lies at the level of which vertebra? T8
- Anterior intercostal veins drain into? Internal thoracic veins
- Anterior intercostal artery terminates in which intercostal space? 6th intercostal space
- Anterior intercostal artery terminates as? Sup epigastric artery and musculo phrenic artery
- Thymus is supplied by? Mediastinal artery of anterior intercostal artery, sup thyroid and inf thyroid artery
- Which intercostal nerve is involved in the formation of lower trunk of brachial plexus?
- Which intercostal nerve supplies the armpit and upper medial side of arm? 2 intercostal nerve
- In coronary artery disease pain refereed to medial side of arm due to? Intercostobrachial nerve
- Pericardium heart and roots of great blood vessels are present in which mediastinum? Middle mediastinum
- Cricoid cartilage is at the level of which vertebra?6 th cervical vertebra
- Length of trachea??? 13cm
- Trachea divides at the level of? T4-5
- Posteriorly trachea contains? Esophagous and led recurrent laryngeal nerve
- Right bronchus before entering the hilum gives? Superior lobar bronchus
- Foreign body tends to enter rt bronchus becoz? Rt bronchus is wider and shorter
- Visceral pleura is sensitive to? Stretch
- Left bronchus on entering divides into? Sup and infer lobar bronchus
- What structure separates parietal pleura from thoracic wall? Endo thoracic fascia
- How are lungs attached to mediastinum? By their roots
- Name the lobes of rt lung? Upper middle and lower
- Functional unit of lung is? Bronco pulmonary segments
- Shape of bronchi pulmonary segment? Pyramida l
- Bronchial arteries are branches of? Descending thoracic aorta
- All lymph nodes living hilum drains into? Tracheobronchial nodes
- Lung os supplied by which plexus? Pulmonary plexus
- Vertical diameter of thoracic cavity is increases by? Contraction and descent of the diaphragm
- Quite expiration is which type of process? Passive process
- Pericardium attached Anteriorly to the sternum by the?? Sternopericardial ligaments
- Pericardium supplied by which nerve? Phrenic nerve
- Apex of heart lies at the level of which intercostal space? 5th intercostal space
- Skeleton of heart consists of? Fibrous rings
- Superior vene cava has how many valves? No valve
- Coronary sinus open into which chamber of heart? Right atrium
- Greater part of anterior surface of heart is due to? Right ventricle
- Name the cusps of tricuspid valves? Anterior, septal and inferior
- Right coronary artery arises from which sinus? Anterior aortic sinus
- Pulmonary valve is best heard at? Medial end of 2nd left intercostal space
- First heart sound is produced by? Closure of tricuspid and bicuspid valve
- The conducting system of heart is composed of which muscle? Modified cardiac muscle
- Name the pacemaker of heart? Sinuatrial node
- SA node usually supplied by? Rt coronary artery
- AV node is located just above which cusp? Septal cusp of tricuspid valve
- Right bundle branch is supplied by? Lt coronary artery
- Only route for cardiac impulse to spread from atria to ventricle is? AV bundle
- Which is the largest branch of rt coronary artery? Marginal branch Lt coronary artery arises from? Left posterior aortic sinus of ascending aorta
- Which branch if left coronary artery supplies the right and left ventricle? Anterior interventricular branch
- Name the largest vein draining the heart? Coronary sinus

- Coronary sinus is continuation of?? Great cardiac vein
- Anterior cardiac vein drains into? Right atrium
- Brachiocephalic vein is formed by? Union of right subclavian and the right internal jugular vein
- Azygous vein drains into which aspect of superior vene cava? Posterior aspect
- Azygous vein usually formed by? Rt ascending lumbar and right sub costal vein
- Ligamentum arteriosus is remains of? Ductus arteriosus
- Intercostal nodes lie at which site of ribs? Head of ribs
- Brachicephalic nodes drain lymph from?? Thyroid and the pericardium
- Thoracic duct begins at the abdomen as a dilated sac called? Cysterna chyli
- Length of right lymphatic duct is?? 0.05 inch (1.3cm)
- The vagus nerves the abdomen through which opening? Esophageal opening
- Phrenic nerves pass in----- of root of lungs? Front
- Name the only motor nerve supplying the diaphragm? Phrenic
- The first thoracic ganglion fused with the inferior cervical ganglion is called? Stellate ganglion
- Middle third of esophagus is supplied by?? Branches of descending thoracic aorta
- Upper end of esophagous is at level of? C6
- Enlargement of which part of heart causes esophageal obstruction? Left artrium
- Esophagogastric junction is at?? T7
- The carina is part of? Trachea
- Tracheostomy site for 6 years old Child is between? 3-4 tracheal rings
- Parietal and fibrous pericardium supplied by which nerve? Phrenic nerve
- Right border of the heart is mainly formed by? Right atrium
- Which vein of heart is located in posterior interventricular sulcus? Middle cardiac vein
- 1st rib articulates with which vertebra? T1
- The longest fives of diaphragm arise from which costal cartilage? 9th constable cartilage
- The phrenic nerve is separated by inferior vene cava by? Fibrous pericardium
- Posterior surface of base of heart is entirely formed by? Left atrium
- SA node is which shaped? Crescent
- Fallots tetralogy is due to unequal division of? truncus arteriosus
- Lung contain how much bronchi pulmonary segments? 10 segments
- Body of sternum is also called? Gladiolus
- Apex of heart is formed by? Left ventricle
- Most anterior structure in thoracic inlet is? Sternohyoid
- J receptors are present in??? Alveolar interistitium
- Thoracic duct also called? Pecquet duct
- Best guide of inter segmental planes is? Veins draining the segment
- Sympathetic supply of heart is from? T1-T5
- Strongest part of parietal pleura is?? Costal part
- Lungs are supplied by? Bronchial arteries
- Lingula is part of which lobe? Left upper lobe
- Coronary arteries arise from which aorta? Ascending aorta
- The largest group of axillary nodes is? Apica l
- Most common site for myocardial infarction is?? Lateral wall of left ventricle
- Phrenic nerve is which type of nerve? Mixed type
- Which nerve segment is commonly injured?? T1
- Female has which type of respiration? Thoracic type
- Left bundle branch supplied by? Right coronary artery
- Complete ossification of body if sternum occurs at? 21 years
- Pleural pain referred to shoulder by which nerve segment? C345
- Pretrachial fascia infections spread to? Anterior mediastinum

FIRST AID RENAL TEST

- Normal GFR?? 100 ml/min
- Renal plasma flow best estimated with? PAH
- Clearance =? UV/P
- Hartnup disease deficiency due to ----- and result in -----? Tryptophan and results in pallegra
- Maximum reabsorption. Is seen in which part of nephron?? Proximal tubule
- Name the channel on thick ascending loop of henle? NaKCl
- Transient action of angiotensin II? Vasoconstriction
- Aldosterone primarily regulates? Volume
- Osmolarity? Ans = Volume
- Macula densa is the part of which tubule? Distal convoluted tubule
- Potent stimulus for erythropoietin? Hypoxia
- Renin is secreted by? B1
- Parathyroid hormone secreted in response to? Tell 3 points... Dec plasma ca, inc plasma po4, dec 1,25(0H)
- ANP is secreted in reposne to? Inc atrial pressure
- Insulin causes? hypokalemia
- Digitalis block which enzyme? Na/K ATPase pump
- U wave on ECG? Hypokalemka
- Low level of magnesium causes? Neuromuscular irritability and arrhythmias
- For every 1 mEq/L Hco3 how much PCO_2 increases? 0.7mmHg
- Which type of Renal tubular acidosis associated with calcium containing kidney stone? Ans= 1
- Muddy brown cast? Acute tubular necrosis
- Most common glomerolunephritis globally? Berger disease (IgA nephropathy)
- Alport syndrome --- mutation in which collagen? Type 4 collagen
- Wagener granulomatous associated with? C ANCA
- Apple green birefringes seen in? Amyloidosis
- Most common glomerular disease in HIV? Focal segmental glomerulonephritis
- Most common glummerular disease in children ??Minimal change nephropathy
- Composition of staghorn calculus? Ammonium magnesium phosphate
- Ethylene glycol(antifreeze) or vit c abuse causes which crystal? Oxalate
- Kimmelstiel Wilson lesion feature of? Diabetec glomerolunephritis
- Radiolucent stone? Ans= Uric acid
- RCC associated with which syndrome? And tell defect of chromosome number? Von Hipple Lindau... Chromosome 3
- Secondary polycythemia? RCC
- Painless hematuria? Bladder carcinoma
- Most common renal malignancy in early childhood? Wilms tumor
- Thyroidization of kidney involve which cast? Eosinophilic
- Diffuse cortical necrosis associated with? Obstetric catastrophes and septic shock
- Most common cause of acute renal failure? Acute tubular necrosis
- ADPKD? Aut dominant
- Tram track appearance seen in? Membranoproliferative glomerulonephritis
- Erythropoietin is formed by which part of kidney? Peritubular capillaries
- Name diuretic causes gout? Loop diuretics
- Diuretic drug of choice for hypercalciuria? Hydrochlorthoazide
- Most common intracellular buffer? Protein
- Which has highest protein content? Ans= Plasma
- Which of the following has highest clearance? Ans= PAH
- Angiotensin 1 is converted to angiotensin 2 in? Ans= Lung capillary
- Which is absorbed passively from the renal tubules? Ans= C l

- 65% Na absorption is in? Proximal tubule
- Thirst is dec by? Ans= ADH
- Aldosterone escape caused by? Ans= ANP
- Normal filtration fraction? Ans= 20%
- Charge barrier is lost in? Ans= nephrotic
- Ureter passes -----the uterine artery? Ans= under
- Extra cellular volume is measured by? Inulin
- Glomerular filtration barrier composed of? 1.
  - Fenestrated capillary endothelium 2. Fused basement
  - Membrane with heparin sulphate 3. Epithelial layer
  - Insisting of podocty
- Clearance>GFR shows? Net tubular secretion
- Renal plasma flow best estimates with? PAH
- Important clinical clue to diabetes mellitus? Glycousuria
- PTH increases ca reabsorption by which transporter? Ca/Na exchanger
- Which part of nephron completely impermeable to water? Thick ascending loop of Henley?
- 80 percent of Na is reabsorbed in? Early proximal tubule
- NSAIDS can cause acute renal failure by inhibiting the renal production of? Prostaglandins
- JG cells secretes renin in response to? Dec renal pressure, dec Na delivery and inc sympathetic tone(b1)
- Peaked T waves are seen in? Hyperkalemia
- Tetany is caused by? Hypocalcemia
- Name causes of normal anion gap? Diarrhea, glue sniffing, RTA
- Which Renal tubular acidosis is hyperkalemic?? Type 4 RTA
- Waxy casts in urine is due to?? Advanced renal disease/ CRF
- Good pasture syndrome is which type type of hypersensitivity disease? Type II
- Spike and dome appearance with subepithelial deposits? Membranous glumerulonephritis
- Hexagonal kidney stone is seen in? Cystiene
- Von HIPPLE LINDAU syndrome is due to deletion in chromosome number? 3
- Acute pyelonephritis affects which part of the kidney? Cortex sparing glomeruli
- Why is the left kidney harvested for transplantation rather than the right? Because left kidney has longer renal vein
- What are the effects of prostaglandins on the glomerulus? Dialates the afferent arterioles and inc GFR
- How and where4 amino acids are reabsorbed in nephron? Amino acids are reabsorbed at level of proximal convoluted tubule by sodium dependent transporters
- What substance is secreted in early proximal tubule that acts as a buffer? Ammonia
- Which three ions indirectly reabsorbed in thick ascending loop of henle? Na K and Cl
- On which segment of nephron does aldosterone act? Collecting tubule
- What is the site of action of angiotensin converting enzyme? Lungs
- Which cells produce renin in the kidney? Juxtaglomerular cells
- What is the primary electrolyte disturbance in metabolic acidosis. Serum bicarbonate
- Diffuse proliferative glomerulonephritis is the most common cause of death of which systemic disease? SLE
- Name four clinical finding associated with nephritic syndrome? Azotemia, oliguria, hypertension an proteinuria .5g/day
- Kidney stones are most commonly composed of whatelement? Calcium
- Name the four components of WAGR complex? Wilms tumor, Aniridia, Genitourinary malformation and mental retardation
- What is the mechanism of action of acetazolamide? Carbonic anhydride inhibitor
- Which loop diuretic is used for diuresis for patient allergens to sulfa drugs? Ethacrinic acid
- What are the effects of hydrochlorthoazide toxicity? Hyperglycemia, hyperlipidemia hyperurecemia, hypercalcemia
- Mechanism of action of loop diuretic? NaKCl transporter inhibitor
- Mechanism of action of angiodema caused by ACE inhibitors? It prevents inactivation of bradykinin which is
  - Potent vasodilator that's leads to angiodema
- Name four clinical finding associated with nephrotic syndrome? Massive proteinuria >3.5g/day, edema, fatty casts and hyperlipidemia

- Name 3 causes of acute tubular necrosis? Renal
  - Ischemia, crush injuries and toxins.

FIRST AID CARDIOVASCULAR TEST

- Coronary artery occlusion most commonly occurs in? LAD
- Cardiac output =? HR*CO
- Stroke Volume affected by? Name three parameters...Contractility, preload, afterload
- Most posterior part of heart? Left atrium
- Vasodilators decrease?? Preload/after load? Ans = Afterload
- EF is the index of? Ventricular contractility
- Viscosity depends mostly on? Hematocrit
- Fixed splitting is seen in? ASD
- S4 is in? Mid diastole/ late/ early? Ans= late
- Period of highest oxygen consumption? isovolumetric contraction
- Isovolumetric relaxation? Period between aortic valve closing and opening of mitral valve
- Expiration inc intensity of which side of heart sounds? Ans=left
- Murmur of Mitral stenosis is best heard in which area? Mitral area
- Myxomatoys degeneration causes which valvular lesion? MVP
- Cardiac muscle action potential has plateau due to? Ca influx
- Rapid repolarization caused by? Massive K efflux
- Pacemaker action potential occurs in? SA AV node
- QRS complex shows? Ventricular depolarization
- AV nodal delay is useful because? Allows time for ventricular filling
- Lyme disease causes which heart block? 3rd degree
- Sawtooth appearance? Atrial flutter
- Cushing triad? Hypertension, bradycardia and respiratory depression
- Aortic arch responds? And transmits via? Inc Bp only --vagus nerve
- Highest blood flow per gran of tissue? Kidney
- Pulmonary vascular hypoxia cause? Vasoconstriction
- Autoregulation In brain caused by? CO_2 (PH)
- Pulmonary capillary wedge pressure good approximation of which pressure? Left atrial pressure
- Boot shape heart? TOF
- Preductal coarctation of aorta associated with which congenital syn? Turner syndrome
- Drug to close PDA? Indomethacin
- Infant of diabetic mother → congenital defect? Transposition of great vessels
- Hyperplasia onion skinning seen in? Malignant hypertension
- Most common site of atherosclerosis? Abdominal aorta
- Thoracic aortic aneurysm associated with? Hypertension
- Common cause of sudden death first few hours after MI? Arrhythmia
- Marker for reinfarction? Ck-MB
- V1-V2 → infarction location? Anterioseptal
- Autoimmune pericarditis after MI? Dressler syndrome
- Sudden death in young athlete? HOCM
- Gold standard in first 6 hours of MI? ECG
- Etiology of dialated cardiomyopathy? Alcohol abuse, beriberi, cocaine use, Chaga disease, doxuebecin, hemochromatosis.
- Isolated right heart failure is due to? Cor pulmonale
- Heart failure cells? LHF/RHF? Ans=LHF
- IV drug abuser's endocarditis valves involved? Tricuspid
- Colon cancer having IE? Organism? Strep bovis

- In rheumatic fever early death die to? Myocarditis
- RF which type of hypersensitivity? Type 2
- Atrial myxoma involves which site of heart? Left atrium
- 49.early lesion in rheumatic fever? MVP
- Most frequent primary cardiac tumor on children? Rhabdomyosarcoma
- Eosinophilia is seen in which vasculitis? Churg Strauss syndrome
- Pulseless disease? Takayasu arteritis
- Vasculitis associated with heavy smokers? Buergers disease (thromboangitis obliterans)
- Angiosarcoma associated with? chloride, thorium dioxide and arsenic
- Benign painful, red blue tumor under finger Nails? Glomus tumor
- Vitamin causing hyperglycemia? Niacin
- Torsa de pointes caused by drug? Name 2? quinidine, sotalol and ibutilide
- Adenosine action time? 15 secs
- Name 2 important function of digoxin? Inhibition NaK atpase and vagus nerve stimulation
- Which drugs decrease effect of bad cholesrterol? Statins
- Dysphagia is caused by enlargement of which part of heart? Left atrium
- In JVP a wave shows? Atrial contraction
- Carotid body responds to dec Po2 at which level? <60 mmhg
- Risk of ventricular rupture on which day of post MI? 2 / 3-7/ 10/ 14??ans= 3-7 (in goljan) 10 days in (first aid)
- In rheumatic fever antibodies are formed against which protein? M protein
- Patient having prosthetic valve having IE? Agent? Strep epidermidis
- Cardiac cirrhosis caused by? RHF/LHF? Ans= RHF
- Tree bark appearance? Syphilitic heart disease
- Most common heart tumors? Metastases
- Print metal angina?? St elevation / depression? Ans = St elevation
- Dirotic notch in aortic pressure curve coincides with which heart sound? S2 heart sound (second)
- Structure with richest blood supply? Carotid body
- Artificial pacemaker is connected to which part of heart? Right ventricle
- Aj J point of ECG what happens?? All part of ventricles is depolarized.
- Principal source of energy to heart in healthy individual is? Free fatty acids
- Myocardial infarction that damages the anterior interventricular septum and the apex ..Which artery is occluded? Left anterior decending artery
- Which parameter does the viscosity depends upon? Hematocrit
- During physical examination what diagnostic sign might be observed in the neck of a patient with right heart failure? Elevated jugular venous pressure
- What is meant by pulses parvus tardus? Pulses are weak, and the strongest part of the peripheral pulse occurs late after the S1 is heard; this is because it takes a long time for blood to cross the stenotic aortic valve to fill the vessels.
- Which murmur is often cause by age related calcification? Aortic stenosis
- What are the most dangerous sequelae or torsa de pointes? Ventricular fibrillation and death
- Patient with wolf parkinson white syndrome have higher risk of which type of arrhythmia? Supra ventricular tachycardia
- An ECG shows no identifiable waves. What is the most likely diagnosis? Ventricular fibrillation
- How does neonates with tricuspid atresia remain viable given with severely compromised circulation? Both ASD and VSD required
- Six days after having myocardial infarction a patient presents with a new onset murmur, which type of murmur is this most likely? Holo systolic murmur of mitral regurgitation
- Quinine causes symptoms of headache and tinnitus, which collectively called? Cinchonism
- Adverse effect of diazoxide? Hyperglycemia secondary to insulin release
- Name the potentially fatal adverse effect of ibutilide? Torsades de pointes
- Which ion is infused to treat torsades de pointed and digoxin toxicity? Magnesium
- Name three toxocities of antiarrhythmatic drug adenosine? Flushing, hypotension and chest pain.

FIRST AID EMBRYOLOGY

- Gametes are descendent of? Primordial germ cells.
- All primary oocytes are formed in which month of fetal life? 5th month of fetal life.
- Primary oocyte remains dormant in which phase? Prophase I
- Secondary oocytes is arrested in which phase? Metaphase II
- Granulosa cells secrete? Estrogen.
- Progesterone stimulates the endometrium of the uterus to enter which phase? Secretory.
- Primordial germ cells derived from? Wall of yolk sac.
- Which cells supply as the stem cell in male throughout reproductive life? Type A spermatogonia.
- Newly ejavulated sperms are incapable of fertilization until they undergo? Capacitation.
- Advanced maternal age is risk factor for? Down syndrome.
- Normally ----- Percent of sperms in an ejaculate are grossly deformed? 10%
- Genetic disorder characterized by hypogonadism and anosmia? Kallmann syndrome.
- Anovulation is often treated with? Clomiphenec citrate.
- If a girl never begins menstruation the condition is called? Primary ovarian failure.
- The reaction which occurs when the sperm binds to the zona pellucida of the secondary oocyte is? Acrosome reaction.
- Sperm produces ATP from? Fructose.
- Blastomeres are totipotent upto which cell stage? 8cell stage.
- -----refers to a stem cell that can differentiate into ectoderm, mesoderm and endoderm? Pleuripotency.
- Blastocyst implants which part of uterine wall? Posterior superior wall.
- Trophoblast differentiate into? Cytotrophoblast and syncytiotropoblast.
- Most common site of ectopic pregnancy? Ampulla.
- Bilaminar embryonic disk is? Epiblast and hypoblast
- The syncytiotropoblast secretes ?? HCG
- HCG can be assayed on ---- day in maternal urine? 10 day
- Left/ right axis determination begins with the asymmetric activity of? Sonic hedgehog protein. Mesoderm further gives rise into? Paraxial intermediate and lateral mesoderm
- The intermediate mesoderm forms which system? Urogenital system
- Sclerotic me of somite forms? Axial cartilage and bone
- Dura matter is derivative of which germ layer? Mesoderm
- Adrenal Cortex derivative of which germ cell layer? Mesoderm
- Chondroma is a tumor arised from remnants of? Notochord
- Placenta attached to the lower part of uteruscovering internal os? Placenta prévia
- Classic cause of first trimester bleeding? Ectopic pregnancy
- Growth hormone of the fetus? Human placental lactogen
- Hofbauer cells are macrophage like cells found in? Placental membrane
- In late pregnancy placental membrane is formed by? Syncytiotropoblast and the fetal capillary endothelium *** (imp)
- The near term fetus excrete about ------ of urinue daily? 500mL
- Potter syndrome lead to which amniotic fluid condition? Oligohyromnios
- Name the fetal albumin produced by fetal hepatocytes? A-fetoprotein
- Mucus connective tissue of umbelical cord is also called? Wharton's jelly
- A light gray shines sac indicates? Omphalocele.
- Vasculogenesis occurs 1st within extra embryonic visceral mesoderm around yolk sac on day? 17
- Hematopoiesis is taken over by liver at which week? Beginning of 5 th week
- Hemoglobin a2r2 is called? Fetal hemoglobin
- Hydroxy urea promotes which hemoglobin? HBF
- Highly oxygenated blood in fetal circulation is
- Oxygenated blood carried by which vessel? Left umbelical vein

- Ligamentum venosus is the ramnent of? Ductus venosus
- Pericardial cavity is formed by which mesoderm? Lateral plate mesoderm
- Adult structure of bulbus cordis? Smooth part of right and left ventricle
- Articulopulmonary septum is derivative of? Neural crest cells
- Abnormal neural crest cell migration such that there is non spiral development of AP septum lead to? Transposition of great arteries
- Rib notching on X-ray is feature of? Postductalcoarctation
- Stapedial artery is derived from which aortic arch? 2nd
- Adult structure if Vitelline arteries? Celiac, sup mesenteric and inferior mesenteric
- Which cardinal vein is not involved in forming IVC? Anterior cardinal vein
- Primitive stomach is formed in which week? 4 weeks
- Primitive stomach rotates --%clockwise around its longitudinal axis? 90
- Which layer of pyloric region hypertrophies in hypertrophic pyloric stenosis? Mucularis externa
- Uncinate process is formed by which bud? Ventral
- Dubble bubble sign is indicative of? Annular pancreas
- Midgut derivative are supplied by? Sup mesenteric artery
- Physiological umbelical herniation is seen in which week? Beginning of week 6
- Midgut loops around ----- counterclockwise? 270
- The urorectal septum fuses with the cloacal membrane at the future site of the anatomical? Perineal body
- Lower anal canal derived from? Proctoderm
- Junction between upper and lower anal canal is indicated by? Pectinate line
- Ureteric bud is an outgrowth of? Mesonephric duct
- Fetal metanephros is located at vertebral level of? S1 - S2
- Allantois becomes fibrous cord called? Urachnus or median umbelical ligament in adult
- Most common cause of congenital obstruction of urinary tract? Ureteropelvic junction obstruction
- Most common renal malignancy of childhood? Wilms tumor
- Nutcracker syndrome occurs when? Left renal vein is compressed between sup mesenteric artery and abdominal aorta
- By which week male and female characteristic of the external genitalia can be recognized? By week 12
- Phenotype sexual differentiation is determined by which gene? Sry gene
- Sry gene encodes for protein called? Testesdetermining doctor
- Vestigial remnants of the mesonephric duct may be found in the adult female called? Appendix vasuculosa
- The Phallus forms the? Clitoris
- Urogenital folds forms the? Labia minors
- Testosterone is secreted by which cells? Leyding cells
- Vestigial remnant of paranesonephric duct is? Appendix testes
- The labioscrotal swelling form the? Scrotum
- Respiratory diverticulum is formed in which week? 4 weeks
- Terminal sac period is the period between? 24-birth
- Pseudo glandular period is the period? 7-16 weeks
- The site of the thyroglossal duct is indicated in adult by? Foramen cecum
- Ultimobrschail body is derivative of which pouch? 4th
- Muscle of facial expression derived by? 2 pharyngeal arch
- No taste bud is present in which part if tongue? Filiform papillae
- All muscle motor supply is by XII cranial nerve except? Palatoglossus (CN X)
- Pharyngeal cyst occurs when ---------- persist? Pharyngeal groove2-4
- Most common site of ectopic thyroid tissue? Sublingua l
- Cleft palate is which type of genetic disorder? Multifacroria l
- Anatomic landmark that distinguishea an anterior cleft palate from posterior cleft palate is? Incisive foramen
- Digeorge syndrome occurs due to defect in? 3 and 4 pharyngeal pouches
- Remnant of notochord is? Nucleus pulposus
- Anterior neuro pore closes on? Day 25
- Posterior neuro pore closes on? Day 27

- The lumen of neural tube for rise to? Ventricular system
- Name 3 primary brain vesicles? Prosen, mesencephalon; rhombencephalon
- At birth the conus mudullaris extend to the level of? L3
- Myelination of the corticospinal tract is not completed until? Te end of 2 years
- Remnants of ratkhe pouch may give rise to a craniophayngioma
- Arnold chiari malformation occurs when the caudal vermis and tonsils of cerebellum and medulla herniated through which foramen? Foramen magnum
- Utricle responds to which acceleration? Linear acceleration
- Semicircular ducts responds to? Angular acceleration
- Stapes is derived from which pharyngeal arch ? Pharyngeal arch 2
- Eye development begins at day? 22
- The choroid fissure closes during week? 7 week
- The extra ocular muscle develops from Mesoderm of which somitomeres? Somitomeres 1, 2 and 3
- Anophthalmia is? Absence of the eye
- HPL can be assayed in maternal blood at week? 6
- Growth hormone of later half of pregnancy? hPL
- ----used by the fetal testes as a precursor of testosterone synthesis? Progesterone
- The most potent estrogen is? Estradio l
- Amniocentesis is preferred in which weeks? 14-18 weeks
- Quickening in a woman first pregnancy in which weeks? 18-20 weeks
- At week 20 uterine fundus is palpable at the? Umbilicus
- Surfactants are produced in which weeks? 25-27
- Normal baseline fetal heart rate is? 120-160 beats per minute
- Maximum susceptible period of teratogenicity is? 3 – 8 weeks
- The most common of CMV fetal infection is? Sensineural deafness
- Teratogenicity of thalidomide is? Limb defect
- Fetal hydantoin syndrome is caused by? Phenytoin
- Aminoglycoside causes which toxicity? CNVIII
- Appendages in wrong position is due to mutation in which gene? Hox gene
- Heart begins to beat in which week? 4 week
- Absent organ due to absent primordial tissue? Agenesis
- Incomplete organ development? Hypoplasia
- Effect of diethylstilbestrol on fetus? Vaginal clearcell adenocarcinoma
- Caudal regression syndrome caused by? Maternaldiabetes
- High risk of spontaneous abortion is side effect of vit a excess
- Decidua basalis is derived from? Endometrium
- Obliteration of Vitelline duct is in which week? 7th week
- Yolk sac erythropoisis is in which weeks? 3 – 8 weeks
- Ductus arteriosus contain which blood? Deoxygenated
- Meninges and spinal cord herniated through spinal cord defect is called? Meningeomyelocole
- Dec separation of hemispheres across Midlineleads to? Holoprosencephaly
- Most common site of syringomyelia? C8-T1
- PDA is derivative of which aortic arch? 6 aorticarch
- Arches are derived from which germ layer? Mesoderm
- Styloid process is derivative of which branchialarch? 2nd
- CN IX supplies which muscle? Stylopharyngeus
- All intrinsic muscles of larynx are derivative of 6th arch except? Cricothyroid (4th arch)
- Thymus is derivative of which pouch? 3rd pouch
- Sup parathyroid derivative of which pouch? 4th (inf 3rd pouch)
- Posterior 1/3 of tongue formed by? 3 and 4 arches
- Name cranial nerves involving in taste sensation? CN VII, IX, X
- Muscle of tongue are derived from ? Occipital myotomes

- Normal remnant of thyroglossal duct? Foramen cecum
- Cleft lip is due to? Failure of fusion of the maxillary and medial nasal process
- Midgut returns to abdominal cavity in ---- week? 10th week
- Spleen is ------ in origin? Mesodermal
- Bicorunate uterus result due to Incomplete fusion of? Paramesonephric duct
- Hypospadiasis is due to ----? Failure d urethral folds to close
- Epispadiasis is due to----? Faulty positioning of genital tubercle
- Diaphragmatic hernia is due to? Absence of pleuro-peritoneal membrane
- Vertebra is derived from? Sclerotome
- Somites are derived of which mesoderm? Paraxial mesoderm
- Left umbilical vein will regress to? Ligamentum Teres
- Gestational age is estimated from? Crown rump length at 8 weeks
- Union of 5th lumbar with 1st sacral is called? Saccaralization
- Structure of 2ndry villus include? Mesoderm, cytotrophoblast and syncitium
- Amputated leg is the result of? amniotic bands
- Auditory tube is formed by? 1st and 2nd endodernal pouch
- Thyroid is derived from? Endoderm
- Four chambers of heart are formed by? Endo cardial cushions
- Strongest layer of small intestine is? Submucosa
- Erythropoietin are secreted by? Peritubular interistitium of kidney
- Which protein maintain red cell shape? Spectrin
- Which is not major basic tissues? Blood
- Ovary epithelium is? Simple cuboidal
- Which structure has 3 layers of muscles? Stomach
- PDFG is secreted by which part of platelets? Alpha granules
- Which cells produce antibodies? Plasma cells
- Most abundant phagocytes in circulation? Neutrophils
- Submucosal glands are present in? Deudonum
- Nissle bodies are? RER
- Most mucinous acini gland is? Sublingual glands
- Calcium releases in muscle from? Sarcoplamsmic reticulum
- In Which state maximum HB produces occurs? Pro erythrocyte
- Average life of Gi epithelium? 2-7 days
- Basophilia of cell is due to? RER
- Which cell release extra cellular fibres and amorphous substance? Fibroblast
- Neurons in olfactory tract are? Bipolar
- Heparin is released by which cells? Mast cells
- Microtubule are part of? Centrioles
- Micro filament composed of? Actin
- ---- Capsule covers the liver? Glisson
- Signet ring appearance seen in? Adipocyte
- Osteoclast are present in? Howships lacunae
- Structural unit of bone? Haversian system
- Myelin hai ---- percent of protein? 20%
- Blood group antigen are? Carbohydrate
- Hassal corpuscles feature of? Thymus
- Hypertrophied pharyngeal tonsil? Adenoid
- Bruner gland are present in submucosa of? Deudonum
- Thickest zone of adrenal cortex? Zona fasciculata
- Which coat is thickest in large veins? Adventitia
- Ovarian follicles are present in? Cortex of ovary
- Eosinophils play role in? Parasitic infection.

FIRST AID GASTROENTEROLOGY

- Splenic artery and vein is in? Gastrosplenic ligament/
- splenorenal? Ans = Splenorenal
- Portal triad? Hepatic artery, portal vein, cbd
- Strongest layer of deudonum? Submusosa
- Bruner glands feature of? Ans = Deudonum
- Arterial supply of GI arises from --- of aorta? Ans = Anterior
- Parasympathetic supply of hindgut? Pelvic
- Watershed area in GI tract? Splenic flexure
- Branches of celiac trunk? Common hepatic, splenic, left gastric
- Rectal venous anastomoses? Sup rectal and inferior recta l
- Below pectinate line painful somatic stimulation is by which
- nerve? Sup rectal/ inf rectal/ pudendal/ middle rectal? Ans = Inf rectal
- Which hepatic zone is sensitive to toxic injury? I / II/ III? Ans = III
- Which is not content of femoral sheath? Ans = Nerve
- Most common hernia in women Ans = Femoral
- Which hernia covers all 3 layers of spermatozoa fascia? Ans = Indirect inguinal hernia
- Name the potent stimulators of gastrin? Phenylalanine and tryptophan
- Hormone secrete Hco3 but not pancreatic enzyme?
- CCK/secretin/ somatostatin? Ans = Secretin
- Motilium action produces which movements? Migratory motor complex
- Source of intrinsic factor? Chief cell/ parietel cell/ mucosal cell? Ans = Parietal cells
- Enzyme secreted by deudonum mucosa? Protease/ enterokinase/ amylase? Ans = Enterokinase
- Fructose is taken up by? Simple diffusion/ facilitated diffusion/counter transport? Ans = Facilitated diffusion
- Name to factors absorbed in terminal ilium? Vitamin B12 and bile salts
- Intra gut antibody? IgG / IgA / IgM / IgE? Ans = IgA
- Bilirubin is the product of? Heme metabolism
- Most common tumor of salivary gland? Pleomorphic adenoma/ werthin tumor? Ans = Pleomorphic adenoma
- Bird beak appearance is seen in!? Gerd/ achalasia? Ans = Achalasia
- Plummer Vinson syndrome? Triad? Dysphagia, glossitis iron defiecincy anemia
- Painless bleeding of submucosal vein in Lower 1/3 of esophagus? cancer/ varices? Ans = Varices
- Progressive dysohagia feature of? Esophegeal cancer
- Whipple disease causative agent? Torphyrema whippelii
- Osmotic diarrhea is seen in? Celiac sprue/tropical sprue/Whipple disease/ lactase def? Ans= Lactase deficiency
- Fat soluble vitamin? ADEK
- Celiac sprue associated with which disease? Dermatitis herpetiformans
- Ulcers resulted due to burn injury? Curling unlcer
- Ulcer due to hypertension? Cushing ulcer
- Stomach cancer associated with which blood group? A/B/O? Ans = A
- Pain increase with meal? Deudonunal/ gastric? Ans = Gastric ulcer
- Ulcerative colitis involves which part of GI tract? Colon
- String sign feature of? Crohn/ ulcerative colitis? Ans = Crohn
- Differentials of appendicitis? Diverticulitis, ectopic pregnancy
- Left sided appendicitis is named to? Diverticulitis
- Most common site of diverticulum is? Ilium/ jejunum/ rectum/sigmoid? Ans = Sigmoid
- Most common congenital anomaly of Gi tract? Meckels diverticulum
- Hirschsprung disease associated with which syndrome? Turner/ down / klinefelter / patau? Ans = Down syndrome
- Sawtooth appearance in Colon? Colonic polyps
- Double bubble sign? Adhesion/ meconium ileus/deudonal atresia? Ans = Deudonal atresia
- Familial adenomatous polyposis ---- Name the gene? APC most common site of carcinoid tumor? APpendix

- Pregnant lady jaundice. Important marker? ALP/AST/GGT/ALT? Ans = GGT
- Which drug cause reye syndrome in children? Acetaminophen / aspirin/ burfen/ ampicillin? Ans = Aspirin
- Mallory bodies seen in? Hepc/ hepB/ autoimmune / alcoholic hepatitis? Ans = Alcoholic hepatitis
- CEA Tumor marker of? Colorectal ca
- Net mug liver caused by? RHF/LHF? Ans = RHF
- Black liver associated with? Gilbert syn/ dubin Johnson syn/ rotor
- syn/ criglar najjar syn? Ans= Dubin Johnson syn
- In Wilson disease , cu deposits in which later of cornea? Descement membrane
- Hemochromatosis associated with? HLA A3/HLA A4/HLA A5? Ans = HLA A3
- Charcot triad ? Jaundice, fever, RUQ pain
- Migratory thrombophlebitis feature of? Ac pancreatitis/ chr
- pancreatitis/ pancreatic adenocarcinoma? Ans = Pancreatic adenocarcinoma
- Marker of pancreatic carcinoma? CA 19/9
- Treatment of carcinoid syndrome? Octreotide
- Magnesium hydroxide causes? Diarrhea/ constipation /seizures? Ans = Diarrhea
- Falciform ligament is derivative of? Fetal umbelical vein
- Superior mesenteric artery is at which vertebral level? L1
- Which type of carcinoma is seen above pectinate line?
- Adenocarcinoma / squamous cell carcinoma? Ans = Adenocarcinoma
- Which zone of liver contains P-450 system? Zone III
- Gastrin inc acid secretion primarily through its effects on? Enterochromaffin like cells.
- The only GI submucosa glands is? Burnners gland
- Direct bilirubin is conjugated with? Glucuronic acid
- Most common malignant tumor of salivary gland? Mucoepidermoid carcinoma
- Feeling of having a lump in one's throat without clinical or radiographic evidence is called? Globus sensation
- Achalasia is due to loss of? Myenteric plexus
- Esophageal strictures associated with? Lye ingestion and acid reflux
- Barrets esophagus is replacement of which epithelium? Stratified squamous with columnar epithelium
- Telescoping of 1 bowel segment into distal segment is called? Intussusception
- Most common site of volvulus is? Sigmoid colon
- Angiodysplasia is confirmed by? Angiography
- Dense core bodies seen in which tumor? Carcinoid tumor
- Cavernous hemangioma is tumor of which body organ? Liver
- In cavernous hemangioma why biopsy is contraindicated? Due to risk of hemorrhage
- Budd chiari syndrome is due to occlusion of? IVC or heptic veins
- Cirrhosis with PAS-positive globules in liver? A1-anti trypsin deficiency
- Unknown cause of concentric onion skin bile duct fibrosis?
- Diagnosis? Primary sclerosing cholangitis
- Obstructive jaundice with palpable gall bladder? Courvoisier's sign
- Why are payers patches important in the immune response? They produce IgA antibodies that combat intramural antigens
- Name 4 major risk factors for stomach cancer? Smokes food, achlorhydria, chronic gastritis and type A blood group
- What surgical complication can lead to bowel obstruction? Adhesion
- What is the cause of bronze diabetes? Deposition of hemosedrin in the skin
- Name two intrahepatic cause of biliary obstruction? Primary biliary cirhosis and primary sclerosing cholangitis
- What enzymes are elevated in acute pancreatitis? Amylase and lipase
- What drug combination is oftenly used as triple therapy for H.pylori eradication? Metronidazole , amoxicillin and PPI
- What drug used to treat gastroparesis? Metoclopromide.

FIRST AID MUCULOSKELETAL TEST

- Autoantibodies against hemodesmosome caused which disease? Bullous pemphigoid
- Pudendal nerve block? Site? Ischial spine
- Unhappy triad? Medial colateral ligament, anterior collateral ligament and lateral meniscus
- Rotator cuff muscles? Supraspinatous, infraspinatous, Teres minor, subscapularis
- Fall on outstretched hand may cause fracture of? Scaphoid
- Wrist drop is caused by injury of? Radial
- Root value injury of Erb Duchenne palsy? C5-C6
- Popes blessing sign is seen in? ulnar
- Winged scapula? Muscle and nerve? Serratous anterior- long thoracic nerve
- Fibula neck fracture? Nerve involved? Common peroneal nerve
- Fast twitch white fibres and dec mitochondria ... Which type of muscle? Type 2 muscle
- Cartilaginous model of bone is first made by which cells? Chondrocytes
- Person can't jump climd stairs or can't rise from seated position? Nerve involved? Inf gluteal nerve (L5-S2)
- Bone formed directly without cartilage? Woven bone
- Advanced paternal age related disease? Achondroplasia
- Erlenmeyer flask bone on X ray? osteopetrosis
- Normal ca, phosphorus and PTH and inc ALP? Disease? Disease Paget's disease
- Vertebral crush fractures usually seen in? Osteoporosis
- Double bubble appearance in? Osteosarcoma (giant cell tumor
- Onion skin appearance in bone? Ewing sarcoma
- Bouchard nodes involve which phalanges? PIP
- Rheumatoid arthritis? Type of reaction? type III
- Baker cysts? Which side of knee? Behind the knee
- Sjogren syndrome associated with which type of lymphoma? BCell lymphoma
- Crystals in Gout? Mono sodium urate crystals
- Chromosomal translocation in Ewing sarcoma? 11;22
- Infectious arthritis? Pathogens? S. Aureus, streptococcus, nisserria gonorrhea
- Reiter syndrome? Triad? Conjunctivitis, urethritis, arthritis
- SLE causes which type of endocarditis? Libman sac endocarditis
- Non caseating granuloma with elevated serum ACE levels? Disease? Sarcoidosis
- Pencil in cup deformaty on x-ray? Which disease? psoriatic arthritis
- Drug induced lupus? Antibodies? Anti histone antibodies
- Schaumman and asteroid bodies? Sarcoidosis
- Giant cell arteritis associated with? Polymyalgica rheumatica
- Fibromyalgia seen in women of? Age range? 30-50
- Mechanic hands seen in? Dermatomyositis
- Antibodies seen in poly myositis? Anti jo antibodies
- Most common neuromuscular junction disorder? Myastheniagravis
- Crest syndrome involves? Calcinosis, Raynaud's phenomenon, esophageal dysmotility, sclerodactyly, telangectasia
- NMJ disorder associated with small lung cancer? Name disorder? Lambart eaton syndrome
- Auspitz sign seen in? Psoriasis
- Allergic contact dermatitis? Type IV HSR
- Mask of pregnancy? Melasma
- Honey colored crusting? Disease? Impetigo
- In scalded skin syndrome exotoxins destroyes which stratum? Stratum granulosum
- In pemphigous vulgaris IGg formed against? Desmosomes
- In Acanthosis nigricans there is hyperplasia of? stratumspongiosum
- Lichen planus associated with which hep? Hepatitis C
- Keratin pearls is seen in? Squamous cell carcinoma
- What is precursor of melanoma? Dysplastic navus

- Febuxostat inhibits? Xanthine oxidase
- Antidote of acetaminophen? N - acetylecystiene
- PGI2 function? Platelet aggregation and promote vasodilation
- Classic triad of sjogren syndrome? Xerophthalmia, xerostomia and arthritis
- Eccrine gland secretes? Sweat
- HLA-D4 associated disease? RhUmatoid arthritis
- Pseudo gout crystal? Calcium pyro phosphate
- Inflammatory bowel disease? Crohn, UC
- Treatment of sarcoidosis? Steroids
- Precursor of squamous cell carcinoma? Actinic keratosis
- C7 root is usually compressed by? Cervical disc lesion
- Name the nerve passes in Guyon canal? Ulnar nerve
- How many tendons passed in carpel tunnel? 9 tendons
- Saturday night palsy is caused by which nerve injury? Radial nerve
- Sign in axillary nerve injury? Flattened deltoid
- Which bone is called funny bone? Humerus
- Klumpke's palsy is usually caused by? Cervical rib / pancoast tumor
- Serratus anterior is supplied by which nerve and what is its root value? Long thoracic nerve and C567
- Name thenar muscle? Opponens pollicis, abductor pollicis brevis, flexor pollicis brevis
- Sensory deficit in tibial nerve injury is seen in which part of lower limb? Sole of foot
- Cause of injury of anterior hip dislocation? Obturator nerve
- What is the source of osteoblast? Mesenchymal stem cells in periosteum
- Vit D deficiency in childhood causes? Rickets
- MacCune-Albright syndrome is a form of which disease? Polyostotic fibrous dysplasia
- Sunburst pattern on X-ray is seen in? Osteosarcoma
- Heberden's nodes involves which phalanges? DIP
- Crystals in pseudo gout? Calcium pyro phosphate
- Infarction of bone and marrow is called? Osteonecrosis
- Fibromyalgia patients must have how many tender points? >11of 18 tender points
- Hyper keratosis is due to increase thickness of which skin layer? Stratum corneum.

FIRST AID REPRODUCTIVE

- Lymph drainage of ovaries? Para aortic lymph nodes
- Ovarian vessels are in which ligament? Suspensory ligament of ovaries
- Fallopian tubule epithelium? Simple ciliates columnar epithelium
- Ejaculation caused by? Parasympathetic / sympathetic /pudendal? Ans = pudendal
- FSH is inhibited by? Inhibin
- Which cells produces anitmullerian hormone? Sertioli cells
- Spermatogenesis occurs in? Seminiferous tubules
- Testosterone and androstenedione are converted toestrogen in ----- and -------? Adipose tissue and sertoli cells
- 5alpha reductase inhibited by which drug? Finesteride
- Placenta is source of which type of estrogen? Estriol
- Estrogen receptors are expressed in which part of cell? Cytoplasm
- During menstrual cycle what is responsible for temperature increase? Progesterone
- Meiosis II is arrested in which phase until fertilization Metaphase
- Implantation within wall of uterus occurs which day of fertilization? 6th day
- HCG detectable in blood after how many days? 1 week
- The best test to confirm menopause? Inc FSH
- Elevated HCG in pathologic states? Name them. Hyaditoform mole, choriocarcinoma, gestational trophoblastic tumors
- NO Barr body is feature of? Turner syndrome
- Most common form of male pseudohermaphroditism? Androgen insensitivity syndrome
- Honeycombed uterus seen in? Hyaditoform mole
- Mortality in eclampsia is due to? Name 2 causes? Cerebral hemorrhage and ARDS
- Paninful bleeding in 3rd trimester? Abruptio placenta
- Oligohydromnios can lead to which syndrome? Potter syndrome
- HPV 18--- E7 gene product inhibits which gene? Rb suppressor gene
- Koilocytes seen in? Invasive cervical carcinoma
- Chocolate cysts? Treatment? Endometriosis ...Danazole
- Most common gynecological malignancy? Endometrialcarcinoma
- Most common of all tumors in females? Leiomyoma (fibroids)
- Worst prognostic gynecological carcinoma? Ovarian carcinoma
- PCOD clinically manifests by? Amenorrhea, infertility, obesity
- Most common ovarian mass in young female? Follicular cyst
- Stroma ovarrii contains? Functional thyroid tissue
- Schiller duval bodies seen in? Yolk sac timor (endo dermal sinus)
- Call-Exner bodies seen in? Granulosa cell tumor
- Spindle shaped tumors that are Desmin positive? Sarcoma botryoides
- Yolk sac tumor marker? AFP
- Krukenberg tumor? GI malignancy that metastasize to ovaries
- Leaf like projections are seen in which breast tumor? Phyllodes tumor
- Single most important prognostic factor or Breast cancer? Axillary lymph node involvement
- Most common cause of acute mastitis? Staph aureus
- Most common cause of breast lump? In female age > 25? Fibrocystic disease
- BPH involve which lobe? Periurethral lobe (lat and mid lobe)
- What is the increased risk of cryptocordisim? Prematurity
- Fried egg appearances seen in? Seminoma
- Bent penid due to acquired fibrous tissue formation? Disease? Peyronie disease
- Drug used to treat male pattern baldness? Finasteride
- Drug used in premature uterine contractions? Ritodrine and terbutaline
- Drug used for breast cancer as well as to treat osteoporosis? Raloxifene
- Malignant painful worst prognosis testicular germ cell tumor? Seminoma

- Prostatic adenocarcinoma involves which lobe? Post lobe (peripheral zone)
- Comedocarcinoma has which necrosis? Caseous necrosis
- Classic stellate morphology shows which Brest carcinoma? Invasive ductal
- Meigs syndrome? Triad? Ovarian fibroma, ascites and hydrothorax
- Diethyesterbestrol used in pregnancy leads to? Clear cell carcinoma
- Ovarian cancer marker? CA 125.
- Dysgerminoma associated with which syndrome? Turner syndrome
- Ovarian dermoid cyst may contain? Fat, hair, teeth, bone and cartilage
- Treatment of endometriosis? Danazol.
- Painless bleeding in any trimester? Placenta previa.
- 5alpha reductase is which type of disorder? Aut dominant/ Aut recessive/ x linked dominant / x linked recessive? Ans = Aut recessive
- Meiosis I is arrested in which phase until Ovulation? Prophase
- Blood from ruprtured follicle cases peritoneal irritation that can mimic appendicitis called? Mittleshmerz
- Most common site of fertilization in Fallopian tube? Ampulla
- Luteal day is usually if how many days? 4 days
- Spermatogenesis begin at puberty with? Spermatogonia
- Broad ligament contains? Ovaries, Fallopian tube and round ligament of uterus
- Ligament of ovary lies ---- to uterus? Lateral / medial/ front /back? Ans = Lateral
- Ovary epithelium? Simple cuboidal
- LH surge causes? Ovulation

FIRST AID PHARMACOLOGY

- ----- Relates the rate of elimination to the plasma concentration? Clearance
- Half life is the property of ---- Order elimination? First
- Fraction of administered drug that reaches circulation is called? Bioavailability
- Drugs give IV have ----- Percent bioavailability? 100%
- Frequency of dosing Is affected by----? Half life
- Constant amount of drug eliminated per unit time indicates which order elimination? Zero order elimination
- Phase I metabolism of drugs usually yields? Slightly polar, water soluble metabolites
- Maximal effect a drug can produce is called? Efficacy
- Amount of drug needed for a given effect is called? Potency
- Therapeutic index is--->? Measurement of drug safety
- Partial action of morphine is at which opioid receptor? MU
- Adrenal medulla is part of which nervous system? Sympathetic nervous system
- Botulinum toxins blocks release of neurotransmitter atwhich terminals? Cholinergic
- Mydriasis is the action of which receptors? A1
- Dec heart rate and contractility of atria is the action of which receptors? M2
- Inc gastric secretion is the action which receptors? H2
- Dec uterine Is the action of which receptor? B2
- Which vasopressin receptor involve in inc vascular smooth muscle contraction? V1
- Challenge test for diagnosis of asthma? Methacholine
- Which drug activate bowel and bladder? Bethanecol
- Clinical application of donePezil? Alzheimer's disease
- Diagnosis of myasthenia gravis done by? Edrophonium
- In chronic myasthenia gravis, drug of choice is? Pyridostigmine
- Antidote of cholinesterase inhibitor poisoning? Pralidoxime
- Adrenal medulla is innervated by which fibres? Cholinergic fibres
- Potent stimulator of sweat, tests and saliva? Pilocarpine
- Atropine effect on eye is? Mydriasis and cycloplegia

- Isoproterenol action is on which receptors? B1 & B2
- Dobutamine mainly effects on which receptor? B1
- Drug used to reduce premature uterine contraction? Terbutaline
- Attention deficit disorder can be treated by? Amphetamine
- Ne centrally acting a2 agonists? Clonidine and methyldopa
- Toxicity of phenoxybenzamine is? Orthoststic hypotension, Reflex tachycardia
- Name selective b-antagonist? Pindolol, acebutalol
- Drugs used in urinary retention in BPH? Prazosin, Terazosin and doxasozin
- What is the effect of b-blocker in angina pectoris? Dec heart rate and contractility
- Antidote of opioid poisoning is? Naloxone/ naltrexone
- Atropine toxicity antidote? Physostigmine salicylate
- Antidote for benzodiapzipine? Flumazinil
- Drugs causing dialated cardiomyopathy? Doxorubicinnd daunoeubicin
- Direct Coombs positive hemolytic anemia is caused bywhich drug? Methyl dopa
- Chloremphinicol causes which syndrome? Gray babysyndrome
- ACE inhibitors main side effect? Cough andangodema
- Drug causing pseudo membranous colitis? Clindamycin
- Vitamin causing hyperglycemia? Niacin
- Name drugs causing SLE-like syndrome? sydralazine, INH, Procainamide and phenytoin
- Tardive dyskinesia is side effect of? Antipsychotics
- Name ATT drug which is P-450 inducer? Rifampin
- Antidote for warfarin toxicity? Vit K, FFP
- Side effect of isoniazid? Neurotoxicity andhepatotoxicity
- Drug which decreases triglycerides? Fibrates
- Drug protective against diabetx nephropathy? ACEinhibitors
- Drug which can cause cyanide toxicity? Nitroprusside
- Hydralazine dec? Afterload/preload
- Action of glitazone? Inc insulin sensitivity in peripheral tissue
- Sulfonyureas closes which channels in b-cells? K^+ channe l
- First line therapy of Type 2 DM? Metformin
- Which drug is teratogen? Carbimazole/ methemazole/propyl thiouracil
- Drug used in SIADH? Demeclocycline
- Mechanism of PPI? Irreversibly inhibit H+/K+ATPase in stomach parietal cells
- Carcinoid tumor is treated by? Octreoride
- Name antacids causes diarrhea? Magnesium hydroxide
- The powerful centrally acting antiemetic is? Ondansetron
- Metaclopromide is which receptor antagonist? D2
- Myeloaupression caused by methotrexate is rescued by whih drug? Leucovori
- Anti Breast cancer drug having endometrial antagonistaction is? Raloxifene
- Myelosuppresion cause by 5 florouracil is rescued by? Thymidine
- Hemorrhagic cystitis is side effect of? Cyclophosphamide
- Nephrotoxicity caused by cisplatin is prevented by? Amifostine
- Name the drug which is Philadelphia chromosome tyrosine kinase inhibitor? Imatinib
- Monoclonal antibody against CD20 is? Rituximab
- Probenecid inhibits reabsorption of Uric acid in which part of nephron? Proximal convulated tubule
- Febuxostat inhibits? Xanthine oxidase
- Antidote of acetaminophen? N-acetylecystiene
- Name anti-TNF antibody commonly used in crohn disease? Infliximab
- Mechanism of aspirin? Irreversibly inhibit both COX-1 and COX-2
- Warfarin effects which pathway? Extrinsic pathway
- Site of action of heparin? Blood
- Heparin toxicity is treated by? Protamin sulphate

- Clopidogrel toxicity cause which haematological deficiency? Neutropenia
- Abciximab binds to which glycoproteins receptor? IIb/IIIa
- Which drug is used or maintenance programe for opioid addicts? Methadone
- Opioid used as cough suppressant? Dextromethorphan
- Drug of choice for absence siezures? Ethosuxemide
- 1st line treatment of eclampsia? $MgSO_4$
- 1st line of treatment for acute epilepsy? Diazepam
- Fetal hydantoin syndrome is teratogenicity caused by? Phenytoin
- Neural tube defects caused by which drug? Valproic acid
- Barbiturates facilitate GABA action by------of Cl channel? Duration
- Which inhaled anesthetic is hepatotoxic? Halothane
- Most common drug used for endoscopy? Midazolam
- IV anesthetic used for rapid and short procedures? Propofol
- Main complication of succinylcholine? Hypercalcemia and hyperkalemia
- Malignant hyperthermia is treated hyperthermia? Dantrolene
- Benztropin improves------in parkinson disease? Tremors and rigidity
- Carbidopa is converted to ---- in CNS? Dopamine
- Selegiline selectively inhibits? MAO-B
- Half life of sumatriptan? < 2 hours
- Marked respiratory depression is caused by which depressants? Barbiturates
- Maurijuana can be detected in urine upto -------Months of last use? 1 month
- Treatment of wernickie korsakoff syndrome is? IV Vitamin B1
- Treatment of delerium tremens? Benzodiazepines
- Drug of choice for ADHD? Methylphenidate
- Social phobias are treated with? SSRI
- Drug of choice for obsessive compulsive disorder is? Clomipramine
- All typical antipsychotics block which receptors? D2 receptors
- Corneal deposits are side effect of which antipsychotics? Chlorpromazine
- Treatment of neuroleptic malignant syndrome? Dantrolene
- Which atypical antipsychotic May cause agranulocytosis? Clozapine
- Teratogenicity caused by lithium? Ebstein anomaly
- Generalized anxiety disorder is treated by? Buspirone
- Drug of choice of bedwetting patient is? Imipramine
- Main toxicity of tricyclics antidepressants? Convulsion, coma and cardio toxicity.
- How much time antidepressant need to have itseffect? 4 – 8 weeks
- Antidepressant used for diabetic peripheral neuropathy is? Duloxetine
- Drug used for altitude sickness? Acetazolamide
- Name osmotic diuretic? Mannitol
- What is the effect of loop diuretic on calcium in the blood? Hypocalcemia
- Gout is side effect of which diuretic? Loo diuretic
- Idiopathic hypercalciuria is treated with? Thiazide diuretics
- While using ACE inhibitor what will be the effect on renin? Renin level increases
- Drug inhibits steroid synthesis? Ketoconazole.
- Contraindications of estrogens? ER positive breast ancer and history of DVTs
- a1-agonist used to treat BPH? Tamsulosin
- Mechanism of action of sildenafil? Inhibit cyclic GMP phosphodiesterse
- Name 2 drugs of 2nd generation of H1 blockers? Fexofenadine, citrizine, loratidin desloratidine
- What is the action of b2- agonist on bronchial muscle? Bronchial smooth muscle relaxation
- Name the mast cell stabilizer? Chromolyn sodium.
- Drug that blocks conversion of arachidonic acid to leukotrienes? Zileuton
- Drug that can loosen mucous plug in Cystic fibrosis patient is? N-acetylcystiene
- Brochoconstriction is mediated by------and-------? Inflammatory and sympathetic tone

- Bipolar disorder is treated with? Lithium
- Drug of choice for cytomegalovirus? Ganciclovir
- Acute promyelocytic leukemia (M3) treated by? Alltrans retinoids acid
- Common treatment of buergers disease? Smoke cessation
- Prophylaxis for Hemophilus influenza (B)? Rifampin
- Treatment if hemorrhagic cystitis is ? Mesna
- Medical abortion is done by? Mifepristone
- Drug of choice for migraine? Sumatriptan
- Treatment of Neisseria gonorrhea? Ceftriaxone
- Neural tube defect prevention done by? Folic aid (folate)
- Drug of choice for PDA? Indomethacin
- Prostate carcinoma is treated with? Flutamide
- Drug used in pulmonary hypertension? Bonestan
- Breast cancer in postmenopausal woman is treated by? Aromatase inhibitor
- First line drug for depression? SSRIs
- Imipenem always administered with ? Cilastatin
- Red man syndrome is side effect of? Vancomycin
- Main side effects of aminoglycoside? Nephrotoxicity, ototoxicity and teratogen
- Trimethoprim inhibits bacterial? Dihydrofolate reductase
- Fluoroquinolones damages to cartilage
- Metallic taste is by which anti microbial drug? Metronidazole
- Optic neuropathy is side effect? Ethambutol
- Endocarditis with surgical or dental procedure ----prophylaxis? Penicillins
- Empiric Therapy for community acquired pneumonia of outdoor patient setting? Macrolides
- Drug of choice Cryptococcal meningitis in AIDS patient? Fluconazole
- Drug which inhibit cell wall synthesis by inhibitingsynthesis of b-glucan? Caspofungin
- Terbinafine used to treat? Onchomycosis
- Leishmaniasis is treated by sodium stibogluconate
- CMV retinitis in immuno compromised patient when ganciclovir fails? Foscarnet
- Orange body fluids is side effect of? Rifampin

FIRST AID BIOCHEMISTRY

- DNA subunit contain which main amino acids? Lysine and Arginine
- What inactivates transcription of DNA? Hypermethylation
- Deamination of cytosine makes? Uracil
- The only histone that is not on the nucleosome core? H1
- Hydroxy urea inhibits? Ribonucleotide reductase
- Amino acids necessary for purine synthesis? Glycine, aspartate and glutamine
- Leach- Nyhan syndrome is the absence of? HGPRT
- Change resulting in early stop codon.... Which mutation type? Nonsense mutation
- Unwinding of DNA template at replication fork is done by enzyme name as? Helicase
- Mismatch repair is mutated in which disease? Hereditary nonpolyposis colorectal cancer (HNPCC)
- Non homologous end joining repair is mutated in disease? Ataxia talengectasia
- Smallest RNA Is? tRNA
- Name the stop codons? UGA, UAA, UAG
- ------ Inhibits RNA polymerase II? a- amantin (found in death cap mushrooms)
- Name start codon? AUG
- Patients with lupus make antibodies to? Spliceosonal snRNPs
- ----- contains actual genetic information coding for protein? Exon
- Most abundant RNA? rRNA

- Rb and P53 inhibits? G1-S
- Permanent cells remain in which phase of cell cycle? G0
- Nissl bodies contain? RER
- Liver hepatocytes and steroid hormone producing cells if adrenal cortex are rich in? SER
- Labile cells never go to which phase of cell cycle? G0
- The distribution centre of protein and lipids from the ER to the plasma is? Golgi Apperatus
- Long chain fatty acids are metabolized in? Peroxisomes
- Retrograde to micro tubule transport is feature of which type of micro tubule? Dynin
- In cilia microtubule arrangement is?
- Immotike cilia due to dynein arm defect .... Syndrome? Kartagener syndrome
- Stain for connective tissue? Vimentin
- ------- inhibits NA-K pump by binding to K site? Ouabain
- Skin contain which type of collagen? Type 1
- Type of collagen defective in osteogenesis imperfecta? Type 1
- Hydroxylation of proline and lysine requires? Vit C
- Cleavage of terminal regions of procollagen transforms it into insoluble? tropocollagen
- Other name of brittle bone disease? Osteogenesis imperfecta
- Late wound repair contains wich collagen? Type!
- Ehlar danlos syndrome is defective is which collagen? TYPE 3
- Fibrillin defect is in which syndrome? Marfan syndrome
- Wrinkles of aging are due to ..... And .....? Reduced collagen and elastin production
- Defective collagen in Alport syndrome? Type IV
- Neither of 2 alleles is dominent.... term? Codominance
- Severity of disease worsens or age of onset of disease is earlier in succeeding generation? Anticipation
- Heteroplasmy is seen in which inherited disease? Mitochondrial inherited disease
- Random X inactivation in females is called as? Lyonizatoin
- Imrinting is due to activation or deletion of genes on chromosome number? 15
- Happy puppet in which syndrome? Angelman's syndrome
- Structural defect is inherited by which pattern? Autosomal dominent
- Ragged red fibres are characteristic of? Mitochondrial myopathy
- Mitochondrial myopathies are? Maternal / paternal
- Tendon xanthoma classically seen in? Achilles' tendon
- Hereditary spherocytosis is due to defect in? Spectrin and ankrin
- Huntington gene is located in which chromosome? 4
- Another name of neurofibromatosis type 1? Von recklinghausen's disease (chromosome 17)
- Ash leaf spots are seen in? Tuberous sclerosis
- APKD is associated with which chromosome? Ch. 16
- Grower maneuver is characteristic of? Duchenne's dystrophy
- Longest known human gene? Dystrophin gene
- In cystic fibrosis which gene is defective? CFTR gene
- Test diagnostic for cystic fibrosis is? Sweat test
- 2nd most common cause of mental retardation? Fragile X chromosome
- Trinucleotide repeat in Fredreich ataxia? (CAA)n
- Rocker bottom feet + micrognathia are seen in which? Edwards syndrome
- Most common chromosomal disorder? DOWN syndrome
- Most common trisomy resulting in live birth after Down syndrome? Edward syndrome
- Patau syndrome is trisomy number? 13
- Cri-du-chat syndrome is congenital micro deletion of chromosome number? 5
- Distinctive ELFIN facies are seen in which syndrome? Williams syndrome
- Diegeorge syndrome is has defects of? Thymic, parathyroid and cardiac
- Which vitamin is contraindicated in pregnancy? Vit. A
- High cardiac outOut is feature of which vit deficiency? B1

- Name 3 D's of pellagra? Dementia, dermatitis and pellagra
- Vitamin used as cofactor on transamination? Vit. B6
- Test used to detect the etiology of the deficiency? Schilling test
- Vitamin that can increase iron toxicity? Vit. C
- Delayed wound healing, hypogonadism, dec adult hair and anosmia are features of which element deficiency? Zinc
- Cofactor for enzymes in decarboxylation reaction? Vit. B1(Thiamine)
- Malignant carcinoid syndrome caused b deficiency of vitamin? Vitamin B3
- Vitamin necessary for dopamine beta-hydroxylase? Vit. C
- Fomipezole inhibits? Alcohol dehydrogenase
- Alcohol dehydrogenase operates via which order kinetics? ZEro order
- Anaerobic metabolism of glucose produces-------ATP via malate aspartate shuttle? 32ATP
- NAD+ is used in -------Reactions? Anabolic / catabolic
- Phosphorylation of glucose in liver is catalyzed by? Glucokinase
- Lipoic acid is inhibited by? Arsenic
- Name the only purely ketogenic amino acids? Lysine and leucine
- Pyruvate dehydrogenase deficiency causes which defects? Neurologic defects
- Pyruvate metabolite --------- carries amino groups to liver from muscle? Alanine
- ATPsynthase inhibitors that directly inhibit mitochondrial ATP synthase? Oligomyicin
- ------ chain fatty acids produce new glucose? Odd
- Muscle cannot participate in gluconeogenesis because it lacks? Glucose 6 phosphatase
- NADPH required for which reactions? Reductive
- NADPH oxidase deficiency leads to which disease? Chronic granulomatous disease
- Most common human enzyme deficiency? G6PD deficiency
- Fructose intolerance is due to hereditary deficiency of enzyme? Aldolase B
- Lens deficient in which enzyme that causes sorbitol accumulation? Sorbitol dehydrogenase
- Which form of amino acid found in protein? L-form
- Most basic amino acid? ARGININE
- At body pH which amino acid has no charge? Histidine
- Which amino acids are required during periods of growth? Arginine and histidine
- Catecholamines are derivative of which amino acid? Phenylalanine
- Heme derivative of which amino acid? Glycine
- Musty body odor is due to which deficiency? Dec phenylalanine hydroxylase
- Alkaptonuria is congenital deficiency of? Homogenistic acid oxidase
- Amino acids involved in maple syrup urine disease? Ile, Leu, Val
- Cardiomegaly is finding of which glycogen storage disease? Pompe's disease
- The enzyme deficient in Von Gierke's disease is? Glucose-6-phophatase
- Most common lysosomal storage disease? Gaucher
- Cherry red spot with no Splenomegaly? Tay Sachs disease
- All lysosomal storage disease are AR except? Fabrey's disease (XR) and Hunter disease (XR)
- Zebra bodies are seen in? Neimann-pick disease
- Fruity odor smell is due to which ketone body? Acetone
- Glycogen stores are depleted after how many days of starvation? Day 1
- Main source of energy after 3 days starvation for brain and heart is? Ketone bodies
- Rate limiting enzyme in cholesterol synthesis is? HMG-CoA reductase
- Why Rbc cannot use ketone? Lack of mitochondria
- LDL transport cholesterol from------ to -------? Liver - tissues
- Cholymicrons are secreted by? Intestinal epithelial cells
- Abeta lipoproteinemia os due to deficiency of? Apo-B100 and apoB-48
- Treatment of cystineuria is ?? Acetazolamide
- Melatonin is derivative of which amino acid? Tryptophan → Serotonin → Melatonin

FIRST AID ENDOCRINOLOGY

- Adernal Cortex derived from? Mesoderm
- Fetal adrenal gland consist of which zones? Outer adult zone and inner active fetal zone
- Islet of lingerhans most common in which area of pancreas? Tail
- Rathke pouch -- ectodermal /endoderm? Ectoderm
- Brains use ------- in starvation? ketone bodies
- TRH stimulates? Name 2? Tsh, prolactin
- Right adrenal vein drains in----? IVC
- Which is present in brain? Glut 1/2/4? GLUT 1
- Insulin cross placenta? T/F? False
- Dopamine---- practin? Stimulate/ inhibit? Inhibit
- Growth hormone stimulated by? Name 3? Hypoglycemia, exercise sleep
- Which zone of adrenal gland is source of cortisol? Fasciculata
- What will increase in 21 hydroxylase deficiency? Mineralocorticoids/ cortisol / sex hormones? Sex hormones
- PTH initially increase activity of? Osteoblast/ osteoclast? Osteoblasts
- Vit D def in childrens? Rickets. In Adults? Osteomalacia
- Calcitonin is secreted by? Para follicular cell of thyroid (C cells)
- Signaling pathway of insulin? Intrinsic Tyrosine kinase
- Thyroid binding capacity in pregnancy? Increase
- Propylthiouracil inhibit -----and------? peroxidase---and-5'deiodinase-----
- Primary cause of Cushing syndrome? Exogenous steroids
- Cushing disease? Inc ACTH
- Carcinoid tumor derived from? Neuro endocrine cell of GI
- Common sites for zollinger Ellison syndrome? Pancreas and deudonum
- DKA most important complication of? Type 1 DM
- HLA associated with? Type 1
- Cataract cause in DM? Sorbitol accumulation
- Marker of carconoid syndrome? 5HIAA
- Nephrogenic diabetes insipidus causes? LITHIUM, demeclocycline
- Treatment of SIADH? Demeclocycline and restrict water
- Name two signs seen in hypocalcemia? Chvostek, trousseaus sign
- Most common cause of primary hyperparathyroidism? Adenoma
- Hashimoto throiditis associated with which malignancy? B cell lymphoma
- Orphan Annie nuclei seen in? Papillary carcinoma
- Name thyroiditis with granulomatos inflammation? de quarin (Subacute thyroiditis)
- Pheochoemocytoma? VMA
- Inc TSH, dec T4, dec freeT4, Dec T3uptake? Diagnosis? hypothroidism
- Acute 1 adrenal insufficiency due to adrenal haemorrhage associated with which microb? Neisseria meningitidis
- No skin pigmentation seen in? secondary insufficiency
- Symptoms of pheochrmomoctyoma occurs In? Spells
- Which os teratogenic? Merhomazole
- ------ containing hormone control body metabolic rate? Iodine
- HIGH plasma renin associated with? sec hyperaldosteronism
- Calcitonin? Dec calcium level
- Glucagon made by --cell of pancreas? Alpha cells
- Rbcs depend only on glucose? True
- Post pituitary secretes? ADH and Oxytocin
- Medulla originated from? Neural crest cells
- Carcinoid causes? Rt sided valvular disease
- Wermer syndrome triad? Parathyroid tumor, pituitary tumor, pancreatic endocrine tumor
- Post partum bleeding leads to which syndrome? Sheehan Syndrome

- ..... Presents as an anterior midline neck mass that moves with swallowing or protrusion of the tongue? Thyroglossal duct cyst
- Most common ectopic thyroid tissue site is? Tongue
- Most common tumor of adrenal medulla in adults which causes episodic hypertension? Pheochromocytoma
- Posterior pituitary derived from and secretes? derived from neuro ectoderm and secretes ADH and oxytocin
- Spermatocyte contains which insulin transporters? GLUT-5
- Prolactin is secreted by? Anterior pituitary
- Prolactin is tonically inhibited by? Dopamine
- Anti diuretic hormone is synthesized in which nucleus of hypothalamus? Supra optic nuclei
- Treatment of central diabetes insipidus? Desmopressin
- Exogenous corticosteroids can cause reactivation of TB and candidiasis by blocking which chemokine? IL-2 production
- Prolonged secretin of cortisol is due to? Chronic stress
- Source of PTH? Chief cells of parathyroid
- Which enzyme stimulate kidney for production of calcitriol? 1alpha- hydroxylase
- Clinical manifestation of hypocalcemia? Cramps, pain, parenthesis, carpopedal spasm
- Thyroid hormones increase Basal metabolic rate via? Na/K -Atpase pump

FIRST AID HAEMATOLOGY

- Professional APCs? Dendritic cell
- Clock face chromatin distribution seen in? Plasma cells
- CD stand for? Cluster of differentiation
- Universal recipient? AB+
- Majority of circulating lymphocytes are? T cells
- Vit K def---- dec synthesis of? 2, 7, 9, 10 protein C and S
- Dec ESR? Causes Polycythemia, sickle cell anemia, CCF,
- Clopidogrel and tiopidine blocks? ADP Receptor
- Basophils stippling seen in? Thalassemia, iron def, lead poisoning, ACD
- Oval cells are seen in? Megaloblastic anemia
- In asplenia what bodies are found? Howell jolly bodies
- Iron def anemia manifests to which syndrome? Plummer Vinson syndrome
- HBH genes --- deletion of how many genes? 3 gene deletion
- Beta thalassemia is due to which type of mutation? Point mutation
- Lead inhibits?? Ferrochelatase + ALA dehydratase
- Treatment of lead poisoning in kids? Succimer
- Inc homocysteine but normal methylmalonic acid and hypersegmented neutros? Megaloblastic due to folate deficiency
- Finding in intravascular hemolysis? Dec haptoglobin, inc LDH, hemoglobinuria
- Pancytopenia? Feature? Severe anemia, neutropenia and thrombocytopenia
- Cause of aplastic anemia? Failure or destruction of myeloid stem
- Hemolytic anemia following oxidative stress? G6PD Def
- PNH impaired synthesis of which gene? mutant PIGA gene
- Sickle cell anemia point mutation of which amino acid? L Glutamic aid with valine
- Osteomyelitis in sickle cell anemia? Agent? Salmonella paratyphi
- 25, erythroblastosis fetalis is due to which immunoglobulin? IgG
- Common cause of macroangiopathic anemia is? Prosthetic heart valves
- CLL is associated with which autoimmune hemolytic anemia? Cold agglutinin (IGM)
- Treatment of sickle cell anemia? Hydroxy urea and BMT
- Tea colored urine is seen in which condition? Porphyria cutanea tarda
- Glanzman thrombosthenia Defect in? GP IIb/IIIa
- Hemophilia defect in which coagulation pathway? Intrinsic pathway

- TTP --- deficiency of? ADAMTS 13
- Causes of DIC? Sepsis, trauma, obstetric complication, malignancy
- Most common cause of inherited hypercoagubility? Factor V ladien disease
- Inc risk of thrombotic skin necrosis with hemorrhage following administration of warfarin? What is the deficiency? Protein C and S.
- In DIC what blood component should we give? FFP
- Cryoprecipitate contains? Factor VIII and factor XIII
- Hodgkin lymphoma has which characteristic cells? Reed-Sternberg cells
- Inc WBC count with left shift and inc leukocyte alkaline phosphatase? What is this reaction? Leukemoid reaction
- Which Hodgkin lymphoma has excellent prognosis? Lymphocyte predominant
- Starry sky appearance scene on which lymphoma? Burkitts lymphoma
- Most malignant gammopathy? Multiple myeloma
- T (11;14) associated with which lymphoma? Mantle cell lymphoma
- 41. Waldenströms macroglobulinemia is associated with with which IG? IgG
- CLL differs from SLL in having? Inc peripheral blood lymphocytesis
- Philadelphia chromosome is seen in? CML
- Vitamin is given as treatment of which malignancy? AML
- Name the chromosome translocation which is responsive to vitamin A? T (15:17)
- Birbeck granules seen in? Histiocytosis X
- Teardrop cell seen in? Myelofibrosia
- In polycythemia Vera which type of mutation seen? JAK2 mutation
- Inappropriate absolute polycythemia is associated with which disease? RCC, wilms tumor
- Patient on heparin what we have to follow? APTT
- Warfarin toxicity is corrected by? Vit K and FFP
- Methotrexate toxicity is reversible by which drug? leucovorin
- Drug used for childhood tumors? Dactynomycin
- Hemorrhagic cystitis is caused by? Cyclophosphomide
- Drug used in breast cancer and is an endometrial antagonist? Raloifene
- Name the drug used in treatment of cml? Imatinib mesylate
- Name the drug used is glioblastoma multiforme? Nitrosourase
- Side effects of cisplatin and Carboplatin? Nephrotoxicity and acoustic nerve damage
- Paclitaxel hyper stabilize polymerized microtubles in which phase? M phase
- Thrombolytic toxicity is treated with? Aminocaproic acid
- A patient on warfarin what will be his follow up? PT, APTT, INR
- Histocytosis expresses which CD? CD1
- Burkitt lymphoma is due to activation of which activation And mention it's translocation? t(8;14) c myc activation
- Most common gammopathy? Monoclonal gammopathy of undermined significance
- Burkitt lymphoma is endemic form in Africa have which lesion? Jaw lesion
- Most common adult NHL? Diffuse large B cell lymphoma
- Reed stern Berg cells are which CD +? CD15 + And CD 30+
- Constitutional signs and symptoms? Hodgkin lymphoma
- Defect in platelet plug formation ---- Increase what parameter? Bleeding time
- Treatment of hereditary Spehrocytosis? Splenectomy
- Name the tapeworm causing b12 deficiency? Diphylobothrium latum
- Chipmunk facies are seen in? Beta thalassemia major
- Cooleys anemia? Thalassemia major
- Heinz bodies seen in? G6PD
- Helmet cells seen in? DIC, TTP HUS, traumatic hemolysis
- Delta granules of platelets secrete? Serotonin, ADP, Ca (SAC)
- Factor VIII is produced by? Endotheliall cells
- Multiple myeloma is a neoplasm of whic cell? Plasma cells
- Mast cell stabilizer? Coromonyl sodium

- APC cells perform their function via? MHC II
- Universal donor? O
- B blood group person what have on Rbc surface and what in plasma? Antigen on Rbc surface and A antibody in serum
- Master of iron regulatory hormone? Hepcidin
- Most common cause of anemia in malignancy? ACD
- Alcohol is toxic to which organelle? Mitochondria
- Form of glutamate for synthesis for folic acid is absorbed in jejunum? Monoglutamate
- Thymidylate synthase irreversible inhibited by? 5 florouracil
- Most common cause of vit B 12 def? Pernicious anemia
- Most common cause of macrocytosis? Alcohol access
- Car scratch disease? Agent Bartonela henslae
- Smudge cells are seen in? CLL
- Blood antibodies are natural antibodyes synthesize in ---- After birth? Payer patches
- Burr cells seen in? CRF
- Sickle cell disease is protective against which disease? Plasmodium falciparum
- Job syndrome is associated with inc of which IG? IgE
- Dec LAP score is seen in which blood malignancy? CML
- Numerous auer rod cells are seen in? Acute premyeolitic leukoemia ---- M3
- Painless lymphadenopathy occurs almost in all leukemia except? Hairy cell leukemia
- Hereditary spherocytosis is which type of Mendelian disorder? Autosomal dominant
- Most sensitive blood cells to radiation exposure are? Lymphocyte
- Gum infiltration is seen in which leukemia? Acute monocytic leukemia
- Protozoa causing eosinophilia? Dientamoeba fragilis
- Free vit B12 binds to R binder which is synthesized in? Salivary glands
- Only leukemia with thromocytosis? CML
- Most common cause of pyridoxine def? INH
- Marker for folate or Vit. B12 def? Hypersegmented neutrophils
- Aplastic crisis is due to which agent? Parvo virus
- Heterophile antibodies are which Ig antibodies? IgM
- Cns and testicle involvement? Which malignancy? ALL
- Common causes of death in multiple myeloma? Sepsis and renal failure
- Most common cause of qualitative platelet defect? Asprin
- Most sensitive screen for DIC? D dimer
- Most common pathogen transmitted by transfusion? CMV
- If factor IX is not available, what is next best choice? FFP
- DIC is stimulated by? Thromboplastin
- Intrinsic and extrinsic pathways converge at? Activator X
- Bence jones proteins are derivatives from? Gamma globulins
- Splenic infarction commonly occurs in? CML
- AIHA is which type of hypersensitivity reaction? Type 2
- Iron is stored in the form of? ferritin
- Best indicator of iron stores is? Serum ferritin
- HB binds with ---- In blood? Haptoglobin
- T (11;22) translocation? Ewing sarcoma
- Cell surface marks of macrophage? CD14

FIRST AID IMMUNOLOGY

- Outer cortex of lymph node contains which cells? B cells
- Which area of lymph node is not well developed in digeorge syndrome? Paracorex
- Lymph drainage of lateral side of dorsum of foot? Popliteal
- Lymph drainage of rectum below pectinate line? Superficial inguinal
- T cells are found in which pulp of spleen? Whie pulp
- Thymus is derived from? 3rd pharyngeal pouch
- MHC gene is located on which chromosome? Ch 6
- APC cells expresses which MHC class? MHC - II
- Grave disease is associated with why HLA subtype? B8
- NK cells use what for induction of apoptosis? Perforins and granzyme
- Antibodies are produced by which cells? Pllasma cells
- Positive selection is done in which part of thymus? Thymic cortex
- Name APCs?? Macrophage, dendritic cell, B cell
- Costimulatory signal is given by interaction between? B7 and CD28
- Th1 cells inhibited by? IL 10
- Which portion of IGM and IGg fixes complement? Fc
- Light chain contributes to which fraction of anticody? Fab
- Main antibody in secondary response to antigen? IgG
- Colostrum contain which antibody? IgA
- IgE mediates immunity against worms by activating? Eosinophils
- Mature B lymphocytes express ------ on their surfaces? IgM and IgD
- Most abundant antibody in blood? IgG
- Antibody with lowest concentration in serum? IgE
- Classic complement pathway mediated by which antibody? IgG and IgM
- Neutrophil chemotaxis done by which complement? C5a
- C1 esterase inhibitor def causes which disease? Hereditary angoidema
- Decay accelerating factor causes which disease? PNH
- antibody pentamer in serum? IgM
- Name the opsonins in bacterial defense? C3b and IgG
- Recurrent Neisseria bacteremia is caused due to def of? C3-C8 def
- Which IL inhibit inflammation? IL 10
- Name the IL that supports growth factor and differentiation of bone marrow stem cells? IL 3
- IL causes fever and stimulates production of acute phase reactants? IL 6
- Cytokine mediates septic shock? TNF-alpha
- Name unique marker of NK? CD56
- All cells have MHC-I except? RBC
- Receptor for EBV on B cells? CD21
- Self reactive T cells become non reactive without Costimulatory molecule ... This phenomenon is called ?? anergy
- IgA in Breast milk is form of which immunity? Passive
- Antibody involved in type 1 HSR? IgE
- Cytotoxic hypersensitivity is which type of hypersensitivity? Type 2
- In erythroblastosis fetalis which Ig is involved? IgG
- Hashimoto thyroiditis involves which type of hypersensitivity? Type 4
- Rheumatic fever is which type of HSR? Type 2
- Anti mitochondrial antibody associated disorder? Primary biliary cirrhosis
- Mixed connective tissue disease associated with which autoantibody? Anti RNP
- Drug induced sle associated with hitch antibody? Anti histone
- T cell deficiencies produce which infections mostly? Fungal ad viral
- In Brutton aggamaglobinemia defect is in which gene? Tyrosine kisane gene
- Jobs syndrome increases which immunoglobulin? IgE

- Digeorge syndrome is failure to develop? 3rd and 4th pharyngeal pouches
- Sinus and lung infections are caused by which Ig deficiency? Selective IgA deficiency
- SCID is due to defective? IL-2 receptor
- Wiskott-Aldrich syndrome presentation triad is? Thrombocytopenia, infections and eczema
- Graft from twin or clone is called? Syngeneic graft
- Rejection occurs within minutes of transplantation is called? Hyperacute rejection
- Vasculitis of graft vessels with dense interisitial lymphocytic infiltrate is feature of which type f rejection? Acute rejection
- Most common infection in transplant recipient? CMV
- Target of infliximab is? TNF-a
- Target of transtuzumab is? Erb-B2
- Drug used to prevent acute transplant rejection? Daclizumab
- Serum sickness is which type of hypersensitivity? Type 3
- In ataxia talengectasia which gene is defective? ATM gene
- Contact dermatitis is which HSR? Type 4
- Fibrinoid necrosis is hallmark of which HSR? Type 3
- Live attenuated vaccine mainly induced which response? Humoral
- Half life of passive immunity is? 3 weeks
- IL that promotes differentiation of B cells? IL 5
- IL that activates NK cells? IL 12
- MAC complex is formed by? C5b-9f
- IgA in circulation is in which form? Monomer
- Which fragment of antibody determines idiotype? Fab
- Foreign body is phagocytosed by? APC
- MHC II expressed only on? APC
- HLA B27 Associated with which disease? Psoriasis, ankylosing spondylitis, IBD and Reiters syndrome
- NK activity is enhanced by? IL-12, IFN-b, IFN-a
- Lymph drainage of stomach? Celiac
- Lymph drainage os scrotum? Sup inguinal
- During extreme cellular immune response which area of lymph node enlarges? P aracortex
- Most common congenital immunoglobulin deficiency? IgA
- Which transplant has best allograft survival rate? Corneal transplant
- Most common drug induced lupus? Procainamide
- Most common cause of death in SLE? Infections
- Reservoir of HIV is? Dendritic cells
- Amyloidosis of which organ is most serious form of organ involvement? kidney
- Which rest for AIDS is confirmatory? Western blot
- Complement components are synthesized mostly in? Hepatocyte
- Sjogren syndrome is associated with? Rheumatoid arthritis
- Initial most sensitive test for SLE? ANA
- Patient has CRF best donor for this patient is? Twin
- Master switch to nucleus for induction of inflammation? NFkb
- IL that stimulates and activates eosinophils? IL 5
- Methyl dopa alters which antigen on Rbc surface? Rh antigen
- Amyloid precursor protein is located on which chromosome? Ch 21
- Misfolded proteins are normally removed by? Proteasomes.

FIRST AID GENERAL PATHOLOGY

- Leading cause of death due to poisoning? CO poisoning
- CO poisoning inhibit which enzyme? Cytochrome oxidase.
- Name mitochondrial toxins? Alcohol and salicylate
- Most susceptible to hypoxia in nephron? Proximal tubule
- Irreversible damage to neuron occurs after ----- Minutes of global hypoxia? minues
- Most destructive free radicals? Hydroxyl free radicals
- Which vitamin is the best neutralizer of free radical? Vit. C
- Marker of intermediate filament degradation? Ubiquitine
- Mallory bodies are present in? Alcoholic liver disease
- Acetaminophen free radicals are formed in? Liver
- Wear and tear pigment? Lipofuschin
- Hemosedrin laden macrophages present in left sides heart failure are called? Heart failure cells
- What is called green bile? Biliverdin
- Disordered cell growth is calle? Dysplasia
- Examples of permanent cells? Neurons, skeletal and cardiac muscle cells
- Most common cause of caseous necrosis? TB
- Programmed cell death is called? Apoptosis
- Guardian of genome is? P53
- Which is specific for pancreatitis? Lipase
- Heterophagy is seen in which cell organelle? Lysosomes
- Cerebral infarct is example of? Liquifactve infarct
- What is called red bile? Bilirubin
- Extrinsic pathway in apoptosis require? TNF
- In lead poisoning lead deposits in? Proximal renal tubule
- Only endogenous pigment? Melanin
- Which metaplasia occurs in brain? No metaplasia occurs in brain
- Most susceptible zone in hypoxia of hepatocyte? zone 3
- Oxidase reaction produce which radicals? Superoxide free radicals
- Primary lysosomes are derived from? Golgi apparatus
- Lewy body seen in? Idiopathic parkinson disease
- Most common cause of tissues hypoxia? Ischemia
- Most common site for metastatic calcification? Kidney
- Vitamin as an antioxidant? Vit E
- Central organ in apoptosis? Mitochondria
- Caspases are involved in which phenomenon? Apoptosos
- Female had silicon breast implant which was then removed, wich cells would be numerous? Plasma cells
- Omental necrosis is of which type? Fat
- Superimposed infection on necrosis is called? Wet gangrene
- Metaplasia of surface epithelium most commonly causes by? Chronic irritation
- In our country the most common cause of cell injury is? Ischemia
- Immediate affect after injury to a vessel is? Vasoconstriction
- Major circulating phagocyte? Neutrophil
- Most important chemical mediator of inflammation? Histamine
- Clearance of neutrophils in acute inflammation is by? Apoptosis
- Neutrophil leucocytosis is caused by? Catecholamines, corticosteroids and lithium
- The hallmark of acute inflammation is increased? Vascular permeability
- Acute phase reactants mostly synthesized in? Liver
- Most common cause of skin abscess? Staph aureus
- Hall mark of chronic inflammation? Tissue destruction
- Kininogen converts into bradykinin due to? Hageman factor

- Prostaglandin that helps in protection of gastrointestinal mucosais? PGE2
- Prostacyclin is produced by? Endothelial cells
- Fever in inflammation is caused by? IL1 and TNF-a
- ICAM and VCAM are responsible for? Leukocyte adhesion
- Most common cause of increases permeability? inflammation
- Chemotaxis is a feature of? Acute inflammation
- Most common cause of hyperkalemia? Renal Failure
- Virchows triad? Endothelial injury, abnormal blood flow and hypercoagubility
- Pulmonary thromboembolism originates from? Femoral veiin
- Best indicator of tissues hypoxia? Mixed venous O_2
- Most common cause of respiratory acidosis? Anxxiety
- Cushing triad? Inc bp, HTN, bradycardia
- 62.most common manifestation of septic patient is? Hypotension
- Most important distinguishing feature if hypo volumic and septic shock is? Temp
- Last mediator of endo toxic shock? IL6
- Death due to embolism after accident? Fat embolism
- Severe generalized Edema is called? Anasarca
- Which vitamin involved in synthesis of collagen? Vit C
- Keyloid is excess of which type of collagen? Type 3
- Corticosteroid inc which wbc? Neutrophils
- The hallmark of healing? Granulation tissue
- The element act as cofactor in collagen synthesis is? zinc
- Polyclonal gammopathy is sign of? Chronic inflammation
- The liver contains stem cells in? Canal of hering
- Most important cells for wound contraction is? Myocibroblasts
- Resistance to tension in main function of which collagen? Type 1 collagen
- Liver regenerates in how many days? 10-14 days
- Most common cause of impaired wound healing? Infections
- Cells increasing in number Is called? Hyperplasia
- Grading of tumor is done by? Degree of cellular differentiation on histological appearance
- Sarcoma involves which origin? Mesenchymal
- Down syndrome is associated with which malignancy? ALL
- Most common metastatic cancer to bone? Breast
- Barrets esophagous associated with? Esophageal adenocarcinoma
- Bcl-2 gene associated with which tumor? Follicular lymphoma
- Ret gene associated with which tumor? MEN IIA and IIB
- Li fraumani syndrome associated with which gene? P53
- Colorectal carcinoma associated with which gene? APC
- TRAP is tumor marker of? Hairy cell leukemia
- S-100 tumor marker of? Melanoma, astrocytoma
- Calcitonin tumor marker of? Thyroid medullary carcinoma
- Disease associated with asbestosis? Mesothelioma and Bronchogenic carcinoma
- Vinyl chloride associated with which disease? Angiosarcoma
- ACTH like peptide are secreted by which tumor? Small cell lung carcinoma
- Most common site of metastasis? Lymph nodes
- Most common cancer related death? Lung carcinoma
- Alkylating agents associated with which malignancy? Leukemia
- Polycythemia is associated with which carcinoma? RCC
- CA-125 tumor marker of? Ovarian Ca
- HTLV-1 virus associated cancer is? Adult T cell leukemia/ lymphoma
- Rb gene associated with which 2 tumors? Retinoblastoma and osteosarcoma
- Dysplastic navus associated with which neoplasm? Malignant melanoma

- Cachexia is mediated by? TNF-a
- c-kit gene associated tumor is? Gastrointestinal stromal tumor (GIST)
- Staging of tumor is done by? Degree of localization/spread based on site and size
- Malignancy of skeletal muscle is called? Rhabdomyosarcoma
- Term carcinoma implies which origin? Epithelial origin
- Tumor involving all germs layers called? Teratoma
- DPC gene associated tumor? Pancreatic Ca
- Bombesin tumor marker of? Neuroblastoma, lung and gastric cancer
- Poly cystic kidney disease is which Mendelian genetic disorder? Autosomal dominant
- Known cause of congenital anomalies are? Multifacrorial
- Most common autosomal recessive disorder is? Hemochromatosis
- First 4 weeks of life is called which period? Neonatal period
- Which disease is commonly associated with down syndrome in younger age? Alzheimer's diseas
- Mitochondrial DNA disorder is associated with ------ Inheritance? MAternal
- Barr body is attached to which part of cell? Nuclear membrane
- Most common cause of neonatal death? Prematurity
- Cataract is caused by which infection during pregnancy? Rubella
- XXY genotype is of? Klinefelter syndrome
- Best way to identify Turner syndrome? Karyotyping
- Achondroplasia is associated with? Inc paternal age
- Pt with primary amenorrhea, webbed neck, short stature.... What is Karyotype? XO
- Allele is which type of gene? Non identical gene
- Triple marker for Down syndrome is? Dec AFP, inc HCG, dec uterine estriol
- Scanty Barr body? Controversial. I m with Turner syndrome
- Most common type of Mendelian disorder is? Autosomal recessive
- Most common X linked disorder is ? fragile X syndrome
- Highest caloric value is of ? Fat
- Beriberi is due to which vit def? Vit B 1(thiamine)
- Most common pathogen causing congenital infection is ? CMV
- Vit A used in treatment of? Acne and acute premyelocytic leukemia
- The most common source of vit k is ? Colonic bacteria
- Name essential fatty acids? Linoleic acid and linolenic acid
- Tryptophan is used in synthesis of? Niacin
- Ionization radiation damages which part of cell? DNA
- Most frequent type of cancer caused by radiation? Acue Leukemia
- Nicotine patch is in treating of?? Ulcerative colitis
- Most common drowning is ? Wet drowning
- What is the most important factor determining daily energy expenditure? BMR
- Most common cause of death in anorexia nervosa? Ventricular arrhythmia
- First hematological sign in total body radiation? Lymphopenia
- Most common systemic complication of IV drug abuser? Hep B
- Which element is use in diabetes? Chromium
- Sepsis in burn patient is due to ? Pseudomonas aeroginosa
- Goat milk lacks in? Folate and pyridoxine
- Gene which is defective in obesity? Leptin
- Rat poisons contain which derivative? Coumarin
- Corn based diets are deficient in? Tryptophan and niacin
- Which current os more dangerous? AC current
- What metabolite of nicotine used for screening? Cotinine
- Cofactor in conversion of dopamine to nor epinephrine? Vit C
- Most common UV B light related cancer? Basal cell carcinoma
- Vomiting in bulemia nervosa produces ---------- alkalosis? Hypokalemic metabolic alkalosis

- What complication occurs in shaken baby syndrome? Retinal hemorrhage
- Which bile acid is not reabsorbed in terminal and has role in producing colorectal cancer? Lithocholic acid
- 1st sign of vitamin A deficiency? Night blindness
- What is least sensitive to radiation? Bone
- Avidin in raw eggs bind with? Biotin
- Ulcer that may develop in burn tissue is? Marjolin ulcer
- Bergers disease is strongly associated with ? Smoking
- Pellagra is due to ----deficiency? Niacin deficiency
- Name far soluble vitamins? K, A, D, E
- Sarcoma is derived of? Connective tissue
- Non neoplastic tissue in foreign origin? Choriostoma
- ----- is a neoplastic component and ------ is non neoplastic component? Parenchyma, stroma
- Benign tumors are enclosed by fibrinous capsule except? Uterine leiomyoma
- Sarcomas spread through ------- and carcinomas through-------commonly? Haematogenous, lymphatics
- Glioblastoma multiforme seeds in? CSF
- Most common cancer in children is? Acute lymphoblastic leukemia
- Most common type of mutation in cancer is? Point mutation
- Most common anemia in cancer? Anemia of chronic disease
- Most common pata neoplastic syndrome? Hypercalcemia
- Carcinoma which invade tissues but dosen't metastasize? Basal cell carcinoma
- Virus cause cancer because they have? Oncogene
- Which of the following is the most radio sensitive phase of cell cycle? M.phase
- Most radiosensitive tumor is? Lymph node
- Tumor involving lymph vessels is called? Cystic hygroma
- Slowest growing thyroid tumor? Papillary carcinoma
- Radiation usually cause cancer after -----years? 5-10 years

FIRST AID CNS

- Astrocyte marker? GFAP (**Ppr BCQ in nov 2017**)
- Micro glia origin? Meoderm
- Free nerve endings sense? Pain and temperature
- Invests single nerve fibre? Endoneuroum
- Norepinephrine ---location os synthesis? Locus ceruleus
- Circadian rhythm nucleus? Supra chiasmatic
- Trigeminal and gustatory pathway relay by which thalamic nucleus? VPL
- Destruction of which centre causes hyperphaiga? Ventromedial
- Input nerves in cerebellum? Climbing and mossy fibres
- Name deep nuclei of cerebellum? Lateral to medial? Dentate, emboli form, globos, festigial.
- Striatum? Putamen + caudate
- Direct pathway has? D1
- Cogwheel rigidity seen in? Parkisnson disease
- Chorea is characteristic of? Basala ganglia
- Essential tremors are treated by? B- blockers
- Hemiballismus characteristic of which lesion? Sub thalamus
- KLüver bucy syndrome? Area of lesion and features? Amygdala------ hyperorality? Hyperphaiga and hyper sexuality
- Wernickie kosrakoff syndrome involves which thalamic nucleus? Dosro medial nucleus
- Frontal eyes field lesion? Eyes look toward the site of leision
- Non fluent aphasia with intact comprehension? Area involved? Brocas
- ------ connects broca with wornicke areas? Arcuate fasciculus

- Cerebral perfusion is normally driven by? PCO_2
- Common site of berry aneurysm with CNIII palsy? Posterior communicating artery
- Contralateral Hemiperesis, dec contralateral proprioreception and ipsilateral hypoglosal dysfunction? Cause Anterior spinal artery
- Charcoat Bouchard microaneurysms associated with? Ch HTN
- CT shows bi convex disk not crossing suture line? What hemorrhage is this? Epidural hemorrhage
- Hemorrhage most commonly caused by systemic HTN? Intraparynchymal hemorrhage
- In ischemic brain disease? Irreversible damage occurs after how much time? >5 minutes
- Brief reversible episode of neurologic dysfunction lasting fewer than 24 hours? Transient ischemic attack
- CSF is made by-----? And reabsorbed by -----? Choroid plexus----- arachnoid granulation
- Clinical triad of normal pressure hydrocephalus? Dementia, ataxia and urinary incontience
- Nerves C1-C7 exist via? Intervertebral foramina
- Subarachnoid space extends to? Lower border of S2
- 1st order neuron of spinothalamic tract are in? Cell body in the dorsal root ganglion
- Dorsal column decussates in? MEdulla
- Poliomyelitis cause destruction of what part on spinal cord? Ant horn of spinal cord
- Floppy baby at Birth? Disease? Werding Hoffman disease
- Treatment for Amyotrophic latera l sclerosis? Riluzole
- Ipsilateral UMN sign below lesion, ipsilateral loss of tactile, vibration below lesion and contralateral pain temperature loss below lesion? Disease? Brown Sequard syndrome.
- Dermatome at nipple? T4
- Movement of head toward one side if cheek or mouth is stroked? Name reflex? Rooting reflex
- Inferior collilculi associated with? auditory
- Pineal gland secretes? Melatonin
- Eye movement, pupillary constriction and accommodation is function of which CN? CN 3
- Cranial nerve nuclei located in which portion of brain? Tegmentum
- Motor innervation of pharynx, larynx and upper esophagus? Nucleus involves? Nucleus ambiguous
- Foramen ovale contains which nerve? Mandibular N
- Hearing and balance controlled by which nerve? CN 8
- Structure passing through jugular foramen? IX X XI Jugular vein
- Cavernous sinus syndrome? Feature? Ophthalmoplegia, ophthalmic and maxillary sensory loss
- CNX lesion? Uvula deviates ---- from side of lesion? Away
- Bell's palsy involve which nerve? Facial nerve proper
- 3 muscles closes jaw... Name them? Masseter, teMporalis and medial pterygoid
- Epinephrine contraindicated in which glaucoma? Close angle glaucoma
- Patient problem going downstairs? Nerve injured? CN 4
- Silent painless glaucoma? Open angle glaucoma
- Right optic tract lesion causes? Lt homononous hemianopia
- Alzheimer's disease most commonly associated with? Down syndrome
- Parkinsonism with dementia? Lewy body dementia
- Charcoat classic triad of MS? Scanning speech, intentional termites, nystagmus
- Gold standard investigation for MS? MRI
- In GBS what step is most critical for treatment and survival? Respiratory support
- Metachromatic leukodystrophy is commonly due to which deficiency? Arysulfate A def
- Drug of choice for absence seizures? Ethosuxemide
- Partial seizures most commonly originate due to which lobe? Medial temporal lobe
- Headache most commonly due to irritation of? Dura matter
- Worst headache of my life? SAH
- Port wine stains are seen in? Sturge weber syndrome
- Cafe -au- lait spots and lisch nodules seen in which disease? NF1
- Von HIPPLE LINDAU syndrome is due to defect in which chromosome? Chromosome 3
- Majority of childhood primary tumors are? Infra tentorial
- Fried eggs seen in which brain tumor? Oligodendrocyte

- Psamomma bodies seen in which brain Tumor? Meningeoma
- Basal ciliary bodies seen in? Ependymoma
- Herniation can compress which cerebral artery? Anterior cerebral artery
- Most common cause of ring enhancing lesion? Mutation
- Browning of iris is side effect of which drug? Latanoprosate
- opoid toxicity is treated with? Naloxone naltrexone
- Maintenance programme for opoid addicts done by? Methadone
- 81.1st line drug for trigeminal neurolgia? Carbamazepine
- 1st line drug for eclampsia? $MgSO_4$
- Gingival hyperplasia side effect of which epileptic drug? Phenytoin
- Barbiturates facilitate GABA A action by? Inc duration of Cl channel
- Benzodiazepine toxicity treated by? Flumazinil
- Which inhaled anesthetic is hepatotoxic? Halothane
- Most common drug used for endoscopy? Midasolam
- Drug used for rapid anesthesia induction and short procedures? Propofol
- Local anesthetic causing severe cardiovascular toxicity? Bupvicaine
- Drug used in malignant hyperthermia? Dantrolene
- Parkinson disease is due to loss of ----neurons? Dopaminergic neuron
- Anti parkinson drug also used against influenza A? Amantadine
- Selegiline selectively inhibits? MAO-B
- Sumatriptan contraindicated with? CAD/ prinzmetal angina
- Haloperidol is antagonist of which receptor? Dopamine receptor
- Cough suppressor opoid? Dextromethorphan
- Brain tumor causing polycythemia? Hemangioastoma
- Most common childhood supratentorial tumor? Craniopharyngioma
- 3rd most common primary brain tumor in adult? Schwannoma
- Butterfly glioma seen in? Glioblastoma multiforme
- Muscle which opens the jaw? Lateral pterygoid
- What is the test used for CN XI injury? syringomyelia
- Contralateral paralysis of lower face only? Which type of lesion is it? UMN lesion
- Nissle substance are not present in? Axon
- Taste sensation from posterior 1/3rd of tongue is carried by which nerve? CN 9
- Perinaud syndrome causes paralysis of which gaze? Conjugate vertical gaze
- Patellar reflex root value? L3-4
- Fredreich ataxia has repeat disorder of which gene? GAA (fraxatin gene)
- Tabes dorsalis is consequence of? Tertiary syphilis
- In syringomyelia what is damaged? Ant white commissure of spinothalamic tract
- Adult spinal cord extends upto? Lower border of L2
- Lateral ventricles connects with 3 ventricle through? Foramina Monro
- Hemorrhagic stroke is often due to? HTN, anti coagulation and cancer
- Shaken baby cAn lead to which intracranial hemorrhage? Sub dural hemorrhage
- Sub arachnoid hemorrhage treated with? Nimodipine
- Nucleus ambiguous effects are specific to which artery stroke? PICA
- Wernickie area is in which gyrus? Sup temporal gyrus
- Slow writhling movements specially of fingers? Athetosis
- Lewy bodies composed of? Alpha- synnyclein
- Neurophysis secretes? ADH + Oxytocin
- Ach location of synthesis? Basal nuclei of mynart
- Paccinian corpuscles senses? Vibration and pressure
- Glassopharyngeal nerve motor supply to which muscle? Stylopharyngeus
- Pseudoptosis seen in whic nerve injury? Abducent
- Hypoglosal nerve supply all muscle of tongue except? Palatoglossus

- Clarke nucleus are found in which spinal cord tract? Dorsal spinocerebellar tract
- Largest nucleus of midbrain? Substantia nigra
- Excitatory transmitter in cerebellum? Glutamate
- Pupillary light reflex centre? Pretectal nucleus
- Most common cns complication after sarcoidosis? Facial nerve paralysis
- Nucleus interposed name of which nuclei? Globos and emboliform
- In Wilson disease, which part of basal ganglion is suffered? Putamen
- Marcus gunn pupil diagnosis made by? Swinging flash light
- Which thalamic nuclei are involved in arousal? Midline/ intralaminar
- Epithalamus consist of? Pineal body and habenular nuclei
- Pinealocytes synthesizes? Name 3 substance Melatonin, serotonin and CCK
- Cells of betz are present in which cortex? Primary motor cortex
- Lesion of prefrontal lobe produces which syndrome? Frontal lobe syndrome
- Hippocampus is characterized by how many layers? 3 layers

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CELL

PAST PAPER BCQS WITH QUICK REVIEW

1.	ECF differs from ICF = HIGH conc of Na and Cl ions
2.	Lysosome contains = Hydrolases
3.	Rer most likely = Protein synthesis
4.	Water enters into cell by = Through pores
5.	Osmotic pressure depends on = Increase number of particles
6.	Most important ICF electrolyte = K
7.	Transport of material by carrier proteins is an example of = Facilitated diffusion
8.	Diffusion is inversely related to = Thickness of membrane
9.	CO_2 is transported from blood to alveoli = Diffusion
10.	Active transport differs from passive transport = Phosphate bond energy
11.	Peroxisomes contains = Oxidases
12.	Detoxification of drugs occurs in = SER
13.	Permeability of a substance depends on = Total cross-sectional area
14.	Cell junctions allowing exchange of cytoplasmic molecuoles between two cells are called = Gap junctions
15.	Osmolarity increases with increase in = Number of solute particles
16.	Cellular and flagellar movement carried out by all except = Myosin
17.	Molecuole used for cell signalling = No
18.	Major lipoprotein source of cholesterol is = LDL
19.	Most high energy phosphate compound = 1 molecuole of long chain fatty acids
20.	Cell membrane = Variable protein and lipid contents depend on their location in cell
21.	Gap junction = Serve as cytoplasmic bridge for sharing of molecuoles
22.	imediate intracellular response to many hormones and neurotransmitters = Second messengers
23.	Membrane protein clathrin involved in = Receptor mediated endocytosis
24.	Peroxisomes = Single membrane
25.	Hydrolysis of ATP to ADP release = 7kcal per mole
26.	Normal intracellular PH = Slightly acidic to extracellular fluid
27.	RBcs in hypertonic solution = Shrink
28.	While calculating plasma osmolality Na is multiplied by = Anions
29.	Na-K gradient maintained by = Na-K ATPase
30.	Nuclear membrane = Continued with RER
31.	Rate of diffusion of solute across the cell membrane depends upon = Total area of membrane surface
32.	Cell membrane generally = 7.5nm thick
33.	Depolarization = Because of NA influx
34.	Repolarization = Because of K efflux
35.	Hyperpolarization = Cl influx
36.	Most ECF Abundant = Na
37.	Interphase = DNA replication and barr bodies
38.	Prophase = Chromosomes condens and become visible, spindle fibers attatch to chromosomes
39.	Prometaphase = Chromosome begin to move and nuclear membrane disappears
40.	Metaphase = chromosome alligment, chromosome thickest
41.	Anaphase = Chromosome separates
42.	Telophase = Two separate sister chromatids, chromosome decondensation, nuclear membranr reappearance
43.	Interphase = DNA replication, Chromosomal replication, barr bodies are studied
44.	Intephase divided into: G1, S, G2, M phase mitosis is also part of it.
45.	G1 = Growth phase+longest phase 8-10 hours+check point for DNA damage
46.	S-phase = DNA replicate+5-6 hours+cytotoxic drugs acts on this phase
47.	G2-Phase = Short 3-4 hours+check point if DNA has replicate properly
48.	G2-Phase = Secondary growth between Sphase and Mitosis
49.	Mitosis m-phase = Shortest 02 hours
50.	Muscle spindle alignment and assemble = Mitosis M-Phase
51.	Nuclear Content Divide = M- Phase
52.	Centriole start moving to opposite = Prophase

53.	Chromosome begin to divide = Metaphase
54.	Division of chromatids = Anaphase
55.	Non-disjunction = Anaphase
56.	Complete division = Telophase
57.	Barr bodies = Heterochromatin
58.	Barr bodies = Have X chromosome
59.	Barr bodies = Seen under light microscope
60.	Barr bodies = Absent in turners
61.	Scanty barr bodies = Turner syndrome
62.	Barr bodies diagnostic for = Turners syndrome
63.	One barr body in = Klinfelters syndrome
64.	No of barr bodies in 0X = No barr body
65.	No of barr bodies in XX = 1 Barr body
66.	No of barr bodies in XXX = 2 barr bodies
67.	Karyotyping index = Index of karyopiknotic nuclei of epithelial cells which exfoliate from vagina.
68.	Most radiosensitive phase of cell cycle = M. Phase
69.	Protein makes an average of = 50% mass of membrane
70.	Sausage shaped organelle with dynamic property = Mitochondria
71.	Lysosomes contains = 40 types of hydrolytic enzymes
72.	Most abundant protein in mammalian cells = Actin
73.	RER or granular endoplasmic reticulum concerned with = Protein synthesis
74.	SER or agranular endoplasmic reticulum concerned with = Steroid synthesis
75.	Entire body contains = 100 trillion cells
76.	Child birth, blood clotting examples of = Positive feed back
77.	Mitochondrial DNA = Maternal origin
78.	Resting membrane potential = Diffusion of potassium outside
79.	While calculating plasma osmolarity Na is multiplied = By two anions
80.	Sec active transport occurs through = Na
81.	Detoxification of drugs occurs = SER
82.	H_2O_2 found in = Peroxisomes
83.	Increase mitochondria are present in apical layers of which of the following cells = Ciliated cells
84.	Musle end plate contains cholinesterase.
85.	Example of Carrrier mediated transport is = Na glucose transport

NERVOUS SYSTEM

PAST PAPER BCQ'S WITH QUICK REVIEW

1.	If thalamus gets damaged, which is not affected = sense of olfaction.
2.	Pt presented to his dentist due to inability to put his dentures, dentist referred back to physician saying there is no dental problem, where is the lesion = Substantia nigra (its parkinsons Feb 2015 question)
3.	A 15 years old girl with fixed dilated pupils. Lesion is at = Oculomotor nerve.
4.	A 30 year old woman in azad Kashmir was injured mildly in an earthquake that killed many people apart from her distant uncle. She would most probably be in = Situational crisis.
5.	Axon arise from conical shape part of neuron cell body called = Axon hillocks.
6.	Hypermagnesemia = Neuromuscular depression (hypo-Mg causes depressed deep tendon reflexes, muscle weakness, if dec acetyl choline release is present in options , click that)
7.	Lower motor neuron lesion = flaccid paralysis
8.	Node of Ranvier = Lack of Myelin sheath
9.	Spindle fibers will decrease discharge of impulses when = Muscle contracts.
10.	Deep coma = nucleus cerelous
11.	Permanent coma = thalamus
12.	Prolonged coma then Periq aquiductal of mid brain(ref ganong bcq)
13.	A female with blurred vision etc case of Multiple Sclerosis = Demyelination of neurons.
14.	A patient came with c/o bitmeporal hemianopia so a blockage was seen at = Upper part of optic chiasma (best Ans: is optic chiasma, but if both upper and lower part are in options, prefer the upper part of optic chiasma)
15.	A tall young girl (child) with history of secretion from breast.on microscospy of anterior pituitary, which cells are abundant = eosinophilic (GH and Prolactin are acidophiles ie chromophils and take eosinophilic dye rest are basophils i-e cells other than these two varieties.
16.	After paralysis sensitive to pain damage in = thalamus (the so called thalamic pain syndrome, the person becomes sensitive even to normal stimuli).
17.	After RTA patient becomes unconscious & on CT scan there is a hematoma which is compressing post central gyrus,s which area will be most affected = Sensory area.
18.	Alpha adrenergic causes.= Mydriasis.
19.	ANTERIOR is for cooling and POSTERIOR is for heating
20.	ANTERIOR is parasympathetic center while POSTERIOR is sympathetic
21.	Aphasia (Non-fluent) after stroke or Trauma which area of Brain is involved = Brocas(and note it fluent aphasia is due to wernickes area involvement)
22.	Beta endorphins = hypothalamus
23.	Cause of global blindness =Chlamydia Trochamatis.
24.	CNS myelination = Oligodendrocytes
25.	Contralateral loss of pain and temp at T9 and ipsilateral loss of proprioception below T8, bilateral normal reflexes = Lesion of spinothalamic tract at T8
26.	Cuneatus and Gracillis damage will result in = Asterognosia.
27.	Damage to first lumbar vertebra will lead to = Conus Medullaris Syndrome.
28.	Dorsal Column Medial Leminsical carries = Proprioception
29.	Superior sagital sinus pressure in standing position = – 10 i-e "minus ten " (Ganong physio)
30.	Epidural space contains. = Venous plexues
31.	Excitation of hypothalamus would cause = Shivering..
32.	Fast pain fiber = A delta
33.	GABA destroyed n substantia nigra = Parkinson.
34.	Golgi muscle tendon = causes muscles relaxation
35.	Golgi tendon organs: respond to = Tension remmeber = "**Tension"** and "**Tendon"** i.e when tension on a muscle increases golgi tendon organs starts firing and relaxes it. and for spindle its Spind"**L**"e→"**L**"engthi.e spindle causes change in lenghth.

36.	Hemisetion with total spinal section differentaiad by =spinal shock
37.	Injury to lateral hypothalamus will = decreases hunger
38.	Intracranial and extracranial veins are joined by = Emissary Veins
39.	Lower motor neuron lesion. = muscle wasting.
40.	Motor unit = single motor nerve fiber innervates multiple muscle fibers
41.	Myelin in CNS is formed by = Oligodendrocytes
42.	Nucleus ambigus supplies = Larynx..
43.	Occulomotor nerve supplies = ciliary ganglion
44.	Olfactory area is present in = Anterior perforating substance (ref RJ last)
45.	Pain transmitted from tip of finger = A delta fibers sensations from the tips and lips are tramsmitted by A beta fibers, but those are not for pain, so don't be confused).
46.	Patient with injury to left 8th cervical segment of spinal cord will not show following sign = Dec sense of pain and temperature below the lesion on same side (pain and temp loss are contralateral ie opposite to the lesion , while position and vibrations senses are ipsilateral
47.	Patients comes with Rt. deviation of tongue, Dec.sense of touch and vibartions,the artery commonly involved in brain is = Ant.Spinal artery
48.	Per mint perfusion of 100g brain tissue per minute = 50-55ml (while brain glucose consumption is 5mg/100gm/min while oxygen consumption is 40ml/min).
49.	PICA damage, supply of which part will be affected = dorslateral of medulla.
50.	Pitutary Gland Causng Bitmemporal Hemianopia .Where is the lesion = Optic Chiasma.
51.	Post ganglionic sympathetic fibers are present in = all spinal nerves, sympathetic outflow is from thoracolambar region, but post ganglionic fibers in all spinal nerves.
52.	Preganglionic nerve fiber = B fiber (while post ganglionic are C fibers, and if aksed pure autonomic fibers, then prefer B fibers, and don't confuse B fibers with A beta fibers)
53.	RegardingCFS= less proteins than plasma.
54.	Regarding Gray matter foot processes = Protoplasmic Astrocytes.
55.	Regarding Pneumotaxic Centre which statement is true = Inhibits Respiration.
56.	Regarding withdrawal reflex = Multisynaptic.
57.	Right optic tract lesion causes = left homonymous hemianopia.
58.	Shivering center is located in = Posterior hypothalamus.
59.	Spinal cord ends at = lower border of L1
60.	Superior colliculus receives which sensation = visual
61.	Tension in the muscle is limited by = Golgi tendon organ
62.	Structure pierced during LP=ligamentum flavum.(total 8 structures are pierced ligamentum flavum is one of them)
63.	Tumor compressing optic chiasma would cause = Bitemporal haemianopia
64.	Upper and lower limits of cerebral flow autoregulation = 50-150ml/min (The ranges mentioned by Francis physiology is 60 to 160 which is almost near to 50 to 150).
65.	Vagus decreases HR by which mechanism = Na (permeability) (the mechanism is, parasymp system decreases Na channels inward current that is responsible for phase 4 depolarization in sa node)
66.	When tension in muscle increases near to rupture which does the relaxation = Golgi tendon organs:
67.	Which of the following Maintain flexor tone of arm mainly =rubro spinal (note that rubroSpinal is for flexor tone while vestibulospinal tract is for extensor tone).
68.	Which of these is not synthesized by post ganglionic sympathetic fibers **= L.Dopa**.
69.	Which structure is embeded in temporal lobe = insula.
70.	Patient has bitemporal hemianopia , lesion is at = **upper part of optic chiasma**
71.	Right sided hemiplagia and right sided fascial palsy, lesion most likely in =**internal capsule**
72.	Right sided hemiplegia with left facial palsy lesion is in = **pons**
73.	Sensory loss on left side of face n left side of body,level of lesion is = **thalamus**

74.	A 59 year old man presented to Emergency in comatose state wid left sided hemiplegia n pin point pupil lesion is at = **Internal capsule**
75.	Pt wid right sided weakness and mouth deviated to left side during talking lesion is at= **Pons.**
76.	Pt presnts wid paralysed right arm and leg,right plantar upgoing and exaggerated reflexes lesion is at=**Left internal capsule**
77.	Lateral ventricle are seperated by =**septum pellecidum**
78.	Primary visual cortex is bradds mann area no=**17**
79.	Which is present in the cavity of cavernous sinus =**CN 6**
80.	Corticospinal tracts end at which level=**Mid Thoracic**
81.	Nerve accompany superficial temporal artery is = **Auricular temporal nerve**
82.	UMNL of facial nerve=**spare upper half of face**
83.	Papillary light reflexType equation here. involves which nerves. =**Optic and occulomotor**
84.	Lesion of latetal corticospinal tract causes =**Ipsilateral spstic paresis**
85.	Lateral horn is present..from spinal segment=**T1.....L2**
86.	Corpus Striatum is = **Cuadate + Lentiform**
87.	Source of nor epinephrine for brain is=**locus cerulus**
88.	Root value of knee jerk is=**L3,L4**
89.	Transaction of the posterior column at T8 level, causes =**ipsilateral loss of fine touch, vibration and proprioception**
90.	Branch of basilar artery=**PCA**
91.	Fluent / receptive aphasia is caused by damage to=**Area 22**
92.	Optic tarct of right side is damaged.. there is =**left homnymus hemianopia**
93.	A patient presents with loss of accommodation. Which area involved=**Midbrain**
94.	A patient has bilateral spastic paresis,,bilateral loss of pain, temp and crude touch and bilateral Horner syndrome, but all posterior column sensation are intact.. diagnosis is =**Anterior spinal artery occlusion**
95.	Afferent limb of corneal reflex= **CN V 1**
96.	Medial geniculate body =**Fibers ascend to thalamocortical areas**
97.	Dissociative loss of pain and temp with preservation of touch sensation=**syringomylia**
98.	In tabes dorsalis, which sensation are lost=**all posterior column sensation**
99.	Contralateral loss of pain and temp at T9 and ipsilateral loss of proprioception below T8, = **Hemisection at T8**
100.	Homonymus hemianopia with macular sparing is caused by the lesion of= **visual cortex**
101.	Subdural hematoma is caused by the bleeding from=**bridging cerebral veins**
102.	Anterior choeidal artery is a branch of= **internal carotid artery**
103.	Which of the area in cerebral cortex represents the frontal eye field=**Area 8**
104.	In syringomylia there is=**bilateral loss of pain and temp sensation**
105.	Leg area in cerebrum is supplied by = **anterior Cerebral Artery**
106.	Hemiballismus is the result of lesion of=**subthalamic nuclei**
107.	Internal capsule is medial to =**globus pallidus**
108.	Extra dural hematoma is caused by the bleeding from=**middle meningeal artery**
109.	Patient presents with right deviation of tongue , decrease Spence of vibration and touch, the artery commonly involved in brain is =**Anterior spinal artery.**
110.	Edinger westphal nucleus is associated with=**Occulomotor nerve**
111.	Mitral cells are present in:=**olfactory bulb**
112.	Optic radiation are=**projection fibres**
113.	Which of the area in cerebral cortex represents the frontal eye field=**Area 8**
114.	Lesion of latetal spinothalamic tract causes=**Contralateral loss of pain, temp and crude touch**
115.	Most commonly affected cranial nerves in diabetic neuropathy =**3rd and 6th**
116.	Patient right eye is deviated outward and downward, lesion is in=**Occulomotor nerve**
117.	Most common site of berry aneurysm is=**origin of anterior Cerebral Artery**

118.	Great cetebral vein of gallan drains into =**straight sinus**
119.	Patient has slow writhing purposeless movements, lesion is in =**globus pallidus**
120.	Primary auditory cortex is present in =**sup temporal gyrus**
121.	Facial paralysis and loss of taste sensation from ant 2/3 of tongue facial nerve damaged area= **facial canal**
122.	Vascular component of meninges =**Arachnoid matter**
123.	Permanent Dilated pupil nerve Involved is=**occulomotor**
124.	Dural sensation lost in middle cranial fossa nerve involved is= **trigeminal nerve**
125.	Dural sensation lost in middle cranial fossa nerve involved is= trigeminal nerve
126.	Most medial cerebellar nucleus is=**Fastigeal**
127.	Brocas area is supplied by=**MCA**
128.	Patient with headache, visual problem and galactorrhea, diagnosed is as a case of prolactinoma... visual problem would be=**bitemporal hemianopia**
129.	Pos 1 /3 tongue sensations lost damage of= **glossophyrngeal nucleus**
130.	Afferent limb of corneal reflex= **CN V 1**
131.	Tip of the nose is supplied by = **Opthtalmic nerve**
132.	In addition to the optic nerves, the optic canals transmit which of the following? Ophthalmic veins = **Ophthalmic arteries**
133.	A patient presents with loss of accommodation. Which area involved=**Midbrain**
134.	Area 4 of the cortex corresponds to=**Primary motor area**
135.	Lentiform nucleus is=**Putamin + globus pallidus**
136.	Lesions of the Right optic tract will cause=**Left Homonymous hemianopia**
137.	Itchy sensation is carried by=**Type cc slow pain fiber**
138.	Fine motor movements r controlld by =**Cerebellum**
139.	Hyper acusis is caused by Lesion =**CN.. 7**
140.	Corticospinal tract ends at which level = **Mid thoraicic level**
141.	Below hemisection of Spinal Cord,Ipsilateral losss=**UMN type paralysis**
142.	Rapidly adapting receptors =**Pacinian**
143.	Tactile two point discrimination is done by = **Meissners (see receptors tablehis book in theory of)**
144.	Steady pressure on skin perceived by=**Ruffini**
145.	Injury above sacral spinal cord (in lumbar cord) results in=**Atonic bladder**
146.	Pt with vibratory loss on right side and anesthesia on left side site of lesion = **Hemisection of spinal cord on right**
147.	Withdrawl reflex is mediated by =**nociceptor**
148.	CSF is produced by which cells= **Ependymal cells**
149.	Patient having subdural Haematoma ,which cranial nerve is effected = **Occulomotor Nerve**
150.	Which of the following cranial nerve nuclei are found in floor of 4th ventricle = **VI, VIII, XII**
151.	The largest cranial nerve is =**5**
152.	Jugular foramen =**Post part of occipital bone.**
153.	Diplopia and medial squint,nerve involved=**abducent**
154.	Aphasia results from damage in =**temporal lobe**
155.	Lesion in tha non dominant hemispere brocas area leads to=**anomic aphasia**
156.	A patinet who got fluent aphasia, but utter few words=brocas
157.	Anomic aphasia occurs due to lession in =**angular gyrus,area39**
158.	Memory area located at =**temporal**
159.	Cerebellum = **receive impulses from motor cortex**
160.	Athetosis =**slow writhing movements**
161.	Trigeminal ganglion..most appropriate =**lies in middle cranial fossa**
162.	Which nerve lies in the cavernous sinus=**Abducent**

163.	Ear old man has pain felt deep in the face and nose between the mouth and orbit to the Ear and temporal region ,the pain may be due to the lesion of the=**Maxillary branch of the trigeminal nerve.**
164.	Dorsal root ganglion contains cell bodies of dorsal column of spinal cord
165.	Man got gunshot injury. He has planters going up, loss of power and no sensations below the level of lesion. Where is the lesion=**Corticospinal and spinothalamic tract**
166.	Ventral spinothalamic tract ends at =**VPL Thalamus**
167.	Which of the following is ipsalateral lesion = **Descending hypothalamic**
168.	Ventral spinothalamic tract carries=**Pressure**
169.	Cell bodies in spinothalamic thract lies in =**Dorsal root ganglion**
170.	Pain, tem, crude touch fibers of face go to thalamus through trigeminal Via = **trigeminothalamic tract**
171.	Not involved in fast pain pathway =**Medial leminscus**
172.	beta endorphins most abundantly are found in =**Hypothalamus**
173.	The swallowing reflex is coordinated in =**Medulla**
174.	Taste fibres frm ant 2/3 of tongue reach cortex via= **thalamus**
175.	Floor of 4th ventricle's superolateral relation =**superior cerbellar peduncle**
176.	Vomiting centre =**Medulla**
177.	Olfactory cortex = **posterior inferior temporal lobe**
178.	Regarding MCA=**olfactory part of frontal lobe**
179.	The commonest site for pyogenic brain abscess is =**frontal lobe**
180.	Brown sequard syndrome:=**Complete LMN type paralysis on same side at the level of lesion**
181.	Pt with sensory anesthesia on right and involvement of left cranial nerveand construction of pupil, area involved=**pons**
182.	True about internal acoustic meatus = **Passes facial and vestibulocochlear nerve**
183.	Brocas area=**non fluent aphasia**
184.	Trigeminal ganglion most appropriate=**lies in middle cranial fossa**
185.	Regarding Sympathetic nervous system,one of the following is true=**Relaxes the Ciliary muscle**
186.	Cells involved in myelin formation around axons in peripheral nervous system are = **Schwann cells**
187.	Micturation due to =**mehanoreceptors in bladder wall**
188.	Sensations from tip of fingers by=**A beta fibers**
189.	Shivering center is located in=**Posterior hypothalamus**
190.	Most radiosenstive tumour=**Craniopharyngioma**
191.	Taste fibers pass through=**Internal Capsule**
192.	A patient came with c/o hemianopia so a blockage was seen at=**Upper part of optic chiasma**
193.	Dorsal Column Medial Leminsical carries=**Proprioception**
194.	Contralateral loss of pain and temp at T9 and ipsilateral loss of proprioception below T8 lateral normal reflexes=**Lesion of spinothalamic tract at T8**
195.	Vein not draining to great cerebral vein=**Occipital**
196.	Epidural anestheisa given to the patient.Nerve spared=**S1,S2**
197.	Pitutary Gland Causng Bitmemporal Hemianopia .Where is the lesion=**Middle of Optic Chiasma**
198.	Pendular knee jerk is the result of=**UMN lesion**
199.	Subdural hematoma due to=**rupture of cerebral vein**
200.	Poorly cross blood brain barrier=**dopamine**
201.	Brain area 3 2 1 =**primary somatosensory**
202.	Oxytocin and vasopressin originated from= **Hypothalamus**
203.	Lesion causing bitemporal hemonopia= **optic chiasma**
204.	Sympathetic have which neurotransmitters at postganglionic end=**Norepinephrine**

205.	Overdose of antidepressant cause =**tonic clonic seizures**
206.	Child present with right sided facial weakness and right sided intention tremors, lesion is at=cerebelo pontine angle
207.	Which of the following inhibits the muscle to stretch beyond limits =**muscle spindle**
208.	Rapidly adapting receptors =**pacinian**
209.	Memory function of which lobe=**Temporal**
210.	Pt had severe headache...CSF showed blood tinge =**sub-arachnoid hemorrhage**
211.	Which drug can not cross Blood brain barrier=**Dopamine**
212.	Neurotransmitter present in brainstem=**Dopamine**
213.	Lesion of dorsal column =**Sensory ataxia**
214.	Purkinje cells are present in which area=**Cerebellar cortex**
215.	Most fibers of the optic tract terminate in=**lateral geniculate body**
216.	Finger sensation receptor =**A beta**
217.	Pupillary reflex lost, accomodation present. Where is the lesion =**Pretectum**
218.	Lesion of caudate nucleus, sunstantia nigra, putaman each and every structure of basal ganglia was mentioned which will he the effect = **Chorea**
219.	Trigeminal lemniscus system =**Trigrminothalamic tract**
220.	A 35 yr male usually goes to Dubai and has H/O immoral sexual activities and doesn't use any protection.He has problem in walking in dark and loses balance,absent light reflexe, no pain sensation,most likely diagnosis=**Tabes dorsalis (caused by syphilis i.e STD)**
221.	15 yr old boy has enlarged posterior cervical Lymph nodes, while taking biopsy which nerve can be damaged=**Spinal Acessory nerve(cox present in posterior triangle)**
222.	After RTA Patient unconcious, on CT scan hematoma compressing post central Gyrus,area affected is =**Sensory area**
223.	Great cerebral veinof Gallen is present in which Cistern = **Cistern of Ambiens**
224.	Release of neurotransmitter due to=**Influx of calcium in presynaptic fiber.**
225.	Regarding blood supply in the brain=**Arteries don't anastomose after entering the brain substance**
226.	Hemisetion with total spinal section differentaiad by =s**pinal shock**
227.	Maintain flexor tone arm by =**Rubro spinal**
228.	Lower motor neuron lesion=**muscle wasting**
229.	Radiotherapy most sensitive to, =**glial glioma**
230.	Most common Brain tumor of posterior cranial fossa in children=**Astrocytoma**
231.	Fracture of which vertebral bone peice damage vertbral coulm= **Axis**
232.	Awkward posture, wide gait,can't perform rapidly alternating tasks,past pointing = **Cerebellar lesion**
233.	Shivering centre located in= **Posterior hypothalamus**
234.	In posterior cranial fossa= **facial nerve enter thru stylomastoid foramen**
235.	Type of fibers connecting adjacent gyri in cerebral cortex =**short association fibers**
236.	Ant cerebral artery supplies = **paracentral something**
237.	Pat complain of morning headache with papiledema =**Hydrocephalus**
238.	Regarding posterior communicating artery,=**connect post cerebral to internal carotid**
239.	Which one of the following is most common brain tumor in children=**Astrocytoma**
240.	Blood brain barrier is formed by=**Capillary endothelium**
241.	Parasympathetic stimulation caused=**Opens intestinal sphincter**
242.	Which of the following is the site of fusion of binocular vision=**Visual cortex**
243.	If thalamus gets damaged,which is not affected= **sense of olfaction**
244.	Dorsal nucleus of vagus nerve is present =**medulla**
245.	Midbrain superior colliculus recieves which sensation = **visual**
246.	Dorsal column damaged,which will be least affected = **sterogonosis**
247.	Posterior communicating artery = **passes above the occulomotor nerve and connects ICA and PCA**

248.	Structure passing thru the cavernous sinus =**CN 6**
249.	Injury to lateral hypothalamus will =**decreases hunger**
250.	Anxiety is dec by the activation of which receptors = **GABA**
251.	Steady pressure is detected by= **ruffinis**
252.	Pacinan corpuscle =**high frequency vibration**
253.	Pt has left hand tremors and increased propensity to fall towards left side. Where is the Lesion = **Left cerebellar hemisphere**
254.	Primary brain vesicle =**Mesencephalon**
255.	Decreased GABA in Globus pallidus and substantia nigra =**Chorea**
256.	Central chemoreceptors respond to=**pCO2 in cerebral veins**
257.	Most common site of obstruction for hydrocephalus =**Aqueduc of sylvius**
258.	Ascending reticular formation located in = **floor of aqueduct of sylvius**
259.	Middle meningeal artery =**passes through foramen spinosum**
260.	Post ganglionis sympathetic fibers are present in =**all spinal nerves**
261.	Which of these is not synthesized by post ganglionic sympathetic fibers =**L.Dopa**
262.	Trigeminal nerve =**Supplies temporalis**
263.	Pt see the left temporal and right nasal fields. Where is the lesion=**Left optic tract**.
264.	Poliomyelitis = **Affects anterior horn cells**
265.	Spinal cord =**In neonates ends at L3**
266.	Intracranial and extracranial veins are joined by =**Emissary Veins**
267.	Norepinephrine is released at=**Post ganglionic sympathetic**
268.	PICA damage, blood supply of which part will be affected = **dorslateral of medulla**
269.	Aphasia due to which lobe involvment =**Temporal lobe**
270.	**Motor aphasia=Brocas area(frontal lobe)**
271.	The dorsal vagal nucleus is presentin =**medulla oblongata**
272.	A person present with diplopia and dizziness for the past one month suddenly went into
273.	Comma, cause lies in =**pontine haemmorhage**
274.	Postganglioic sympathetic nerves doesn't release=**Dopamine**
275.	Tunning fork placed on head sensations percieved by =**paccinian corpuscle**
276.	Which part of brain has role in memory=**Frontal lobe (Temporal lobe if not in option than frontal)**
277.	Patient with tic doloreaux (Trigeminal neuraglia), analgesia given to block trigeminal ganglion at which site =Middle cranial fossa
278.	True about spinal cord =**Conus medullaris terminates in neonates at the level of – L3**
279.	Patient with intentional tremors and facial paralysis lesion at =**Cerebellopontine angle**
280.	During L.P structure pierced = **dura matter**
281.	All para sympathetic fibers are =**cholinergic**
282.	A boy came in hosp vid complains of loss of sensation over nose and mouth extending upto temporal region nerve involve is= **maxillary division of trigeminal Nerve**
283.	Trigeminal ganglion = **In middle cranial fossa**
284.	Neural crest cell = **Sensory ganglion**
285.	Infection cravenous sinus is due to = **Inf ophthalmic vein**

BLOOD

Past Paper Bcq's With Quick Review

1.	A 10 yrx boy repeated visits to opd with pallor frontal bossing = thalasemia major
2.	Primigravida taking iron tablets, lots of fresh vegetables and juices .what deficiency she is at risk of developing = calcium (iron reduces the absorption of calcium and hence may cause its deficiency, if Ca is not in options click vit B12, but the deficiency of vit B12 takes time as its stores lasts longer; note that if a person is taking both calcium and iron tablets he/she is advised to take iron at night and calcium in the morning to avoid nutrients combat.
3.	Erythropoises occurs:> in middle trimester mainly from:→liver→ 10-28 WEEKS ➔ spleen →18 weeks to adult → bone marrow→ 6 weeks till birth → Liver
4.	G6pd deficiency = Bite cell.
5.	A 22yrs female pt. with 13th week of pregnancy after having crush fractures in RTA dies after 3 days, most likely cause of death is = Fat embolism
6.	A 64-year-Old man with posterior cervical lympadenopathy which is firm andmobile. Hb 13-14 hct = 40 wbc 7230 plateletes 250000 no hepato splenomegaly seen psy showed numerous small monomophic lymphocytes = hodgkin lymphcyte predominant (cervical lymph nodes in the Neck is the most Common Site of HL).
7.	Anemia wid Blast Cells in peripheral = Erythroblastosis fetalis.
8.	Complication Associated with Trochanteric Fracture is = Pulmonary Embolism
9.	Coumadin (warfarin) question = inc coagulation time.
10.	Erytropoiten is always raised in = Sec.polycythemia.
11.	Female presents with DVT Says she has been taking some kind of pills. = Ocps.
12.	Following is an autosomal dominant disease is = Hereditary spherocytosis
13.	Following would cause massive infarction and destruction leading to patient death = Thromboembolism
14.	Girl with h/o of gum bleeding, giant platelets, plt count 85k, =bernaud solier (note, B for Bernaud souleir and B for Big platlets)
15.	Hemophilia a gen located on = X chromosome.
16.	Regarding iron deficiency anemia diagnostic is =Seum ferritin if this is not in options then select iron+TIBC (alone TIBC has no importance)
17.	If FACTOR IX not available = FFP
18.	In Iron def anemia in pregnacy, Increased = TIBC
19.	Lady with leg Swelling from last 5 months with no history of fever and cough but cxr show bilateral peural effusion Derranged Lfts and Rt Heart Enlargement = Recurrent Thromboembolism.
20.	Man, With Weakness and Dysphagia, Profile with Target Cells = Iron Deficiency Anemia (plummer vinson syndrome)
21.	Megalobalstic anemia invest = Intrinsic factor antibodies
22.	Most common site of malignancy in pts suffering from nuclear outbreak = Hematopoietic
23.	Newborn with an Erythroblastosis Fetalis having group B positive what is best for management = Immunglobin Anti Rh
24.	Patient after gastrectomy is on VitB12, the cells lost in the gastrectomy = parietal cells
25.	Patient developed hemolysis due toG6PdD deficiency, what will happen Next = Self limiting.
26.	Patient having dec levels of factor II, VII, IX, X, most likely have = Dec Vit.K
27.	Patient having hyperplastic bone marrow, anaemia, Increase Platelets is probably suffering from = Leaukemia
28.	Patient having increased levels of IgE, most probably suffering from = Parasitic infection

29.	Patient with jaundice, anaemia, high reticulocyte count is having = Hemolytic anaemia
30.	Percentage of Plasma out of ECF = 30%
31.	Plasma Protein Binds with All Except = Oxygen
32.	Pregnant lady anaemic, Best lab investigation = CBC
33.	Regarding Fetal erythropoiesis 3 to 6 weeks = yolk sac
34.	Stimulus for Erythropoietin secretion is = Hypoxia
35.	Thalassemia carrier percentage in Pakistan = 5%
36.	Thromocytopenia in Children due to Acute Viral infection is because of = Antibodies against platelets.
37.	Transfusion reaction will occur if we transfuse a person with A+ve group, the following group = AB-ve
38.	Type of defect in Hereditary spherocytosis = Structural defect
39.	Vit k def. First n foremost dec. = Protein c (if protein C is not in options, prefer factor seven.
40.	Vit k not absorbed coagulation factor decreased = Prothrombin
41.	wafarin toxicity treatd by = acute case by FFP and in chronic case by vit k
42.	Washed RBCs are used for prevention of = Hypersensitive Reaction
43.	Young pt having Hb:6.0, TLC:3.5/ul, Plts:1lac is suffering from = Aplastic anemia
44.	Incubation period of which disease is longest = Infectious Mononucleosis
45.	Newborn with an Erythroblastosis Fetal is having Blood gp B+ve what is best for management = Immunoglobulin
46.	Blood group A+ transfusions reaction due to = B+ve
47.	Which is normal HB = HbA
48.	After haemorrhage Plasma protein return to normal after how many days = 2-3 weeks
49.	Pregnant lady anaemic, Best lab investigation = CBC
50.	Plasma protein return to normal after howmany days = 10-12 days or 2 to 3 weeks
51.	Patient with Gastrectomy presents with Anemia after one and half year, what will you give = Vit B12
52.	Most imp buffer in blood = HCO_3 (most imp is HCO_3 anywhere)
53.	If factor IX not available = FFP (cryoprecipitate doesn't contain facto 9)
54.	If factor 8 not available = Cryoprecipitate.
55.	Pregnant women 1st trimester develops Atrial fibrillation what would you give = IV Heparin
56.	Patient came in with sore throat, fever and lymphadenopathy. His monspot test was positive. His blood show atypical leukocytosis. What is the type of cell that is affected = B-cell
57.	INR is for = Oral anticoagulation therapy
58.	A man goes to a high altitude 02 delivery to tissues is maintained by = Hb conc is increased
59.	Not Included in Blood Coagulation Profile = Anti thrombogin 3
60.	Diagnostic feature of DIC=presence of D – dimers
61.	Iron binds to = Transferrin
62.	Heparin is Contraindicated in patients = Thrombocytopenia
63.	Extent to which a tissue gets occlusion of its blood supply depends upon = Rate of development of thrombosis
64.	Intrinsic pathway is activated by = Contact of tissue collagen when it comes in contact
65.	Anticoagulant are cantaindicated = Thrombocytopenia
66.	Scenario on fisherman wth anemia, which parasitic infection = Diphylo bothridium lautm
67.	Patient has anemia mcv 65, mch 24 wth target cells = Iron difficiency anemia
68.	Patient has cirrhosis, ascits and develop bruising which will b difficient=vit K
69.	Patient transfused with 2 weeks old Bood, Blood contain mainly=RBC
70.	DIC, caused by = Thromboplastin

71.	Recurrent abortion APTT raise=antiphospholipid syndrome
72.	Pregnant lady blood, there will b increase of = TIBC
73.	Pregnant lady normocytic normochromic anemia appropriate = Plasma volume expansion
74.	After total gastrectomy what occurs = Pernicious anemia
75.	After partial gastrecrtomy = Iron deficiency anemia (ref ganong physiology)
76.	There are no blood agglutininns in which blood group = AB+
77.	Most effective Dvt prophylaxis = low molecular wt heparin
78.	Warfarin check= PT or INR (best is INR)
79.	A16 years old boy is prescribed CO-trimaxole for fever. After 12 hours he developed red color urine and profound weakness. Lab tests show intravascular hemolysis. The most common cause of his problem is=G6PD Deficiency
80.	Child is having more bleèding from minor wounds. No such family history is there. He also has diarrhoea BT is 6 min CT is 50 min s there is no family hx of any disease. Diagnosis=vit k def. (5 jan2015)
81.	DNA virus =infectious Mononucleosis
82.	2year old baby failure to thrive, Hb 4, on examination anisopikilocytosis, Nucleated RBCS, present = Thalesemia Major
83.	Two liters Normal saline infusion = Inc blood volume
84.	Blood gp with no agglutinin = AB+
85.	Fibrinogen def = ITP
86.	Which factor def causes thrombosis instead of bleeding = Factor 5
87.	Young boy e pallor crew cut appearance on xray dignostic test = HB electrophoresis
88.	Iron stored in females = 2.4gm (ref Goljan)
89.	Pt with pallor, dysphagia hb.6h/ dl, MCV 68, MCH 24, cause is = Iron def
90.	Pt of acute haemorrhage component which will be replaced in the end = RBC
91.	Platelets = Increases after spleenectomy
92.	Half life of platelets is 4 to 5 days and life span is 10 days (big difference)
93.	Soon after splenectomy = Thrombocytosis (feb 2015)
94.	Lymphocytes = Immunity against cancer cells
95.	Most severe reaction = A+ to O+
96.	Intracellular buffer is = Proteins
97.	Intracellular buffer of blood = Haemoglobin
98.	Philadelphia chromosome is in = Cml
99.	A patient with hb 4.8, plt 240.,hbf 97%.hba2 is 3%.diagnosis = thalasemia intermedia
100.	For detecting thalasemia in intrauterine life =Chorionic villous sampling
101.	Regarding polycytemia Vera = Increase blood concentration
102.	Loss of 8% blood volume gradually over 30 minutes(?), without fall in BP, greatest amount of blood is lost from=capillaries
103.	Which of the following stimulate erythrocytes stem cells to proliferate and differentiate= erythropoietin
104.	Blood group antigens are = Glycoproteins
105.	Platelet aggregation by = TXA2
106.	Bleeding disorder. Only sons affected hemophilia A Mode of transmission = X linked recessive
107.	Treatment of vWD = cryoprecipitate
108.	A patient with anemia with MCV in normal range most likely cause =After blood loss >2 days
109.	A patient with history of bleeding gums n wounds prolonged bleeding time and PT 28SEC (control 12sec)wats the diagnosis = won wiliband disease
110.	Known case of sickle cell anemia became deep jaundiced HB low which type of crisis it will cause= Hemolytic crisis

111.	Known case of IHD type 2 diabetic present with chest pain HB is 6 TLC was normal platelet was normal 120, PT 13 (control 11) APTT 23 (control 21) . What should be transfusion= Fresh whole blood.
112.	Post PPH, multiple blood transfusions from blood bank,O positive, will lead to = Hemochromotasis
113.	Antiobiotic given, patient has deranged PT APTT and normal platelets what will you give=Vit. K
114.	Patient lacks coagulation factor 2, 7,9,10 what is deficient=Vit. K
115.	In Sickle cells disease protein affected is = Beta globin
116.	In Iron deficiancy anaemia which is increased = TIBC
117.	A fisherman presented with slowly developing lethargy, easy fatigue and palpitations. His diet comprises of fish and rice mostly. Physical examination showed pallor and loss of touch sensations in both feet and lower limb. His CBC showed Hb 7.5/dl MCV 132 platelets and TLC normal most likely causative parasite = Diphylobothrium latum
118.	A young girl has patechie on body, no H/O of recent illness and drug use, laborator
119.	Investigations show normal Hb and TLC count but platelets are decreased, most likely diagnosis = Idiopathic thrombocytopenic purpura
120.	A 12-year-old boy with hemophilia A has had episodes of pain about his knees for the past 6 years. Over time, there has been an increase in size of his knee joints, with deformity. Laboratory studies show decreased levels of coagulation factor VIII activity. Which of the following materials is most likely to be seen within the joint space following episodes of pain= Cholesterol crystals.
121.	Which one is first line of Defence in body tissues = Macrophages ref guyton
122.	Mother blood group A, one child 0 nd other child AB, FATHER have blood group= O
123.	Large increase in blood volume occurs in=hypertonic Nacl
124.	Male pt with severe hemorrhage, presented in unconscious state, transfused with 2 weeks old blood. Blood mainly contain = RBCS
125.	Cells which contain sense granules and have igE antibodies on their cell membrane are = Basophils
126.	Virus cause carcinomas by oncogenes mutation, which of the following carcinoma occur by this mechanism = T-cell leukemia
127.	64-year-Old man with posterior cervical lymphadenopathy which is firm and mobile. Hb 13-14 hct 40wbc 7230 platelets 250000 no hepato splenomegaly seen biopsy showed numerous small monomorphic lymphocytes = Hodgkin lymphocyte predominant
128.	Girl with h/o of gum bleeding, giant platelets, plt count 85k = Bernaud solier
129.	Required for transport of B12 in blood = Transcobalamin
130.	Anemia wid Blast Cells in peripheral blood = Erythroblastosis fetalis
131.	Thalesemia carrier percentage in Pakistan=5%
132.	Post PPH, multiple blood transfusions from blood bank, O positive, will lead to = Hemochromotasis
133.	Mild transplant rejection myosial biopsy shows = Lymphocytes
134.	64-year-Old man with posterior cervical lympadenopathy which is firm and mobile. Hb 13-14 hct 40 wbc 7230 plateletes 250000 no hepato splenomegaly seen biopay showed numerous small monomophic = Hodgkin lymphcyte predominant
135.	Mother blood group A, two children with group AB, O, father group will be = B
136.	Anemic hypoxia =Carbon monoxide poisoning (ref Ganong physiology)
137.	Girl with h/o of gum bleeding, giant platelets, plt count 85k = Bernaud solier
138.	A man goes to a high altitude 02 delivery to tissues is maintained by = Hb conc is increased
139.	Young patien with history of taking some drug with anemia, HB is 8, WBC 9000 and platele is 240000 and Peripheral blood shows Immuture Cells = Acute lymphoblastic leukemia
140.	Typical scenario of sickel cell anemia with abdominal pain jaundice etc= HB ss

141.	Itp scenario was given splenectomy done which organism will cause postsplenectomy recurrent infections = hemophilis influenza
142.	In cell mem of RBCs, CL- and HCO3- exchange occurs through=band3
143.	Anemic pt, Hb 6.2 platelets 450,000 TLC normal range BME shows erythrocyte hyperplasia = Leukemia (CML can have thrombocytopenia)
144.	RBC antigens = secreted in saliva (ganong Physiology)
145.	Heparin primarily works through = anti thrombin 3
146.	Human blood = Iron is mainly in haemoglobin
147.	Thalassemia suspected in fetus, how to diagnose =Chorionic villous sampling maternal blood for fetal RBCs or antigen
148.	Child with recurrent knee joint swelling and pain. Faxtor 8 was 57 %, i guess and factor 9 was 8 % ya 18% (dont remember exacctly). What is the disease = Christmas disease
149.	20yrs Female with anemia, hb 6, retics 10%, spleenomegaly, peripheral smear showed microspherocytes. What test to do = RBC survival studies
150.	Child has episodes of bleeding nd echymosis i guess since birth hb 9.8 mg/dl nd platelets count was normal 180 x 10^3 bt prolonged = Platelet function defeact
151.	Young girl, used a drug for back ache, platelets were in normal range, WBC 7000, neutropenia, hb was 9, small imature cell in peripheral film = Acute leukemia
152.	Chloride shift in RBC = Band 3
153.	41% hematocrit = RBCS, WBCS, Platelets (ganong physiology bcq)
154.	A 35 years old girl has been using analgesic for backache range WBC 7000 neutropenia. Her hb was 9 with small immature cells in peripheral smear diagnosis = Drug induced
155.	Adverse blood transfusion reaction occurs in = AB neg to A+
156.	90 ears old lady has bruise on hand n arm... she has no other complaint = Thrombocytopenia
157.	In von willebrand disease = Inc BT
158.	Left shift Hb dissociation curve = High altitude
159.	Blood group antigens are = Glycoproteins
160.	In polycythemia vera which is not raised = Erythropoietin
161.	RBCS are = Have glycolytic enzyme activity
162.	Factor viii is produced by = Hepatocytes or endothelial cells
163.	Patient with low Hb and had multiple ulcers the body, type of anemia = Sickle Cell anemia.
164.	Patient with jaundice had low Hb and increased reticulocytes count type of anemia = Hemolytic anemia
165.	True about platelets = Count increases after splenectomy
166.	In human blood = Iron binds to haemoglobin
167.	Iron stored in parenchymal tissue in the form of = Ferrittin
168.	Unsoluble form of iron is = Hemosiderin (nov 2014)
169.	Female with weakness and lethargy with RBCs 5.5 diameter and very thin red line of RBC in peripheral smear = Microcytic hypochromic anemia
170.	Splenectomy is most useful in = Hereditary spherocytosis
171.	Father Rh positive and mother Rh negative, how will you counsel them = Hemolytic disease of newborn may occur
172.	Patient with vague abdominal pain with nausea, pain was not related to any meal, no cardiac issues, glucose normal, endoscopy was done which showed normal stomach with no mass or ulcers, it was found non-specific gastritis, what is the cause = Pernicious anemia
173.	Meal, no cardiac issues, glucose normal, endoscopy was done which showed normal stomach with no mass or ulcers, it was found non-specific gastritis, what is the cause = Pernicious anemia
174.	Difference between arterio-venous blood = ABGs
175.	Increase ESR more than 100 occurs in = Multiple Myeloma
176.	A male present in clinic vid pallor fatigue and lethargy Ix of choice = CBC
177.	A 6-year-old girl vid HB 6.2 MCV 58 FL MCHC 27 PCV 20 pallor and lethargy vid platelets count 250,0000 and wbsc 7000 suffering from = IDA

178.	Which clotting factor deficiency leads to thrombosis rather then bleeding = Factor v laiden
179.	Soldier on hilly area for 6 months came back with the complaint of cyanosis Nd other features = Secondary polycythaemia
180.	G6Pd disorder most commonly = Genetic
181.	A child with dec platelet count, after acute viral infection = Anti bodies to platelets
182.	A male patient after a few days of severe burns developed high grade fever. Blood culture yielded of gram negative rod. He suddenly developed a bleeding diathesis. The most likely cause in this setting is = Disseminated intravascular coagulation
183.	A 2-year-old boy has been brought to the hospital for circumcision. There is history of excessive bleeding from the umbilical stump at the time of birth. Two cousins bleed profusely after circumcision by surgeon. The blood test most likely to give a clue to the diagnosis is = Activated partial thromboplastin
184.	Cells which contain sense granule and have ig E antibodies on their cell membrane are = Basophils (also mast cells)
185.	A19 year old male with a petechial rash otherwise completely well. There is no history of bleeding, recent illness or use any medication. An examination of peripheral smear is normal except for virtual absence of platelets. The most likely diagnosis in this patient is = Idiopathic thrombocytopenia purpura
186.	Pt with blood group A+ his serum was not cross matched with the donors which was inc in his serum (G) = Duffy
187.	A pt. got spleen rupture and she is going to spleenectomy. What's her peripheral blood picture right now = Howel jowel bodies
188.	A young boy with abdominal pain and pupura, platelets are normal=Henoloch scholen purpura
189.	lymphocytes are not increased in = Polycythemia Vera
190.	Patient is taking glucocorticoid have Dec in = Lymphocytes
191.	Iron transport is carried out by = Transferrin
192.	Important factor in pathogenesis of thrombosis = Endothelial injury
193.	A baby born with erythroblastosis fetal is with blood group A+ he receives blood group = A-ve
194.	Immunoglobin synthesis occur in = Spleen
195.	Immunoglobin synthesis occurs by = Plasma cells
196.	VwF cause = Platelets adhesion
197.	Natural antithrombotic released in body = Plasminogen
198.	Natural anticoagulant is = Heparin
199.	Thrombocytopenia is caused by = High molecular weight heparin
200.	Which one is not correlated = Leukemia and cyclophosphamide
201.	Most effective way to prevent dvt in hospitalized patients = Low molecular weight heparin
202.	Heparin will inhibit = Clot propagation
203.	Atomic bomb, release of Stroncium-90 which affect milk products so it causes = Leukemia
204.	Leukemia is a group of cancers that usually begins in the bone marrow and results in high number of which abnormal cells = White blood cells
205.	25 years old woman on analgesic tablets presented with fever 101 bleeding gums, epistaxis mild Jaundice, and moderate hepatospleenpmegaly. WBC 8500, HB 9.5Mild neutropenia and thrombocytopenia Diagnosis = Drug reaction to drug.
206.	A patient has chronic myelogeneous leukaemia the Philadelphia chromosome can be seen in which of following cell = Granulocytes
207.	In chronic myeloid leukaemia which cell doesn't inc = Lymphocyte
208.	Virus related cancer = T cell leukaemia
209.	Hairy cell leukaemia = Characteristically spares lymh nodes
210.	Hemolytic disorder which best respond on splenectomy = Hereditary spherocytosis
211.	Scenario of leukemia what will be Investigation of choice = Bone marrow biopsy
212.	Best index of platelets is = Clot retraction time

213.	Intravascular hemolysis is diagnosed by decrease in hepatoglobulin
214.	Burkits lymphoma = EBV
215.	Most likely cause of anemia in malignant tumour is = Bone marrow depression
216.	Thrombocytopenia occurs in except = Henoch Schonlein purpura
217.	Most charcteristic change in polycythemia = 50% in hct
218.	In polycythemia rubra vera = Platelet count may be raised
219.	Erythropoiten is always raised in = Secondary polycythemia
220.	The subtype of Hodgkin's disease which is hostogenetically distinct from all other subtypes is = Lymphocyte predominant
221.	Splenic infarction is seen in = CML
222.	Trephine biopsy is done for = Aplastic anemia
223.	Polycythemia can result from excess intake of = Cobalt
224.	Hyper eosinophilia occurs in = Hodgkin Lymphoma
225.	Macrocytic anemia = Phenytoin
226.	Which of the following can cause hemolysis = Lead
227.	Secondary polycythemia is caused by excess of = erythropoietin
228.	Regarding non-Hodgkin disease = extra nodal Manifestations are more common than Hodgkin lymphoma (for differnces see table in blood chapter)
229.	19-year-old girl has metastatic cancer, it may be = Acute lymphoblastic leukemia
230.	Aortic valvular prosthesis associated with = macroangiopathic anemia
231.	Aplastic anemia is diagnosed on = Bone marrow trephine alone
232.	If a person rapidly ascends to high altitude then what will happen = pulmonary edema.
233.	A young man present with low grade fever, anemia, abd easy fatigue CBC shows blast cells with scanty cytoplasm that are CD-19 positive, probable diagnosis = Acute lymphoblastic leukaemia.
234.	Effect of heparin antagonized by = protamine sulphate
235.	In polycythaemia Vera, all of the following are seen except = Thrombocytopenia
236.	ESR is decreased with = globulin is decreased
237.	ESR is decreased when increase in = Albumin
238.	ESR is raised in which one of the following conditions = Anaemia
239.	Which of the following cause megaloblastic anaemia = Tapeworm
240.	All of the following are the causes of relative polycythaemia except = Dengue haemorrhagic fever
241.	Polycythaemia increase = Cardiac output
242.	Most common cause of enlargement of lymph node = Metastatic tumor
243.	Epitheloid cells in granulomas are formed by which cells = Macrophages
244.	In initial stage of warafin theraphy def of = Protein c and s
245.	VWF release from = Weibel bodies of endothelial cells
246.	Inc basophil in = CML
247.	Peripheral neuropathy…numbness mcv 112 = Vit B-12
248.	Abundant cells in a patient with allergy and protective against parasitic infection = Eosinophils
249.	Bicarbonate chloride shift in rbc which protein = Band 3
250.	Patient aged 65 years, is diagnosed to have severe aplastic anemia. HLA compatible sibling is available. The best option of treatment is = Anti thymocyte globulin followed by cyclosporine
251.	Transfusion reaction will occur if we transfuse a person with A+ve blood group, the following group = AB-ve
252.	In PPD induration you will find = T cell
253.	Important chronic cells = Macrophages (ref Goljan patho)
254.	Natural anticoagulant = Heparin
255.	Natural antithrombotic = Plasminogen
256.	Basophils are inc in polycythemia vera.

CVS

PAST PAPERS BCQS QUICK REVIEW

1.	2nd heart sound = Isovlumic relaxation
2.	30 yr male newly diagnosed wth HTN, on ECG lt ventricular hypertrophy, serum cholesterol 200, FBS 88 mg%, urinary sugar ++ RFTs were normal, K 2.5, Na 140, what is cause of his HTN = (conns syndrome) Primary hyperaldosteronism. (5 feb 2015 convenional)
3.	Atrial fibrillation = Pulse deficit
4.	Best indicator of venous return = end diastolic volume.
5.	Cardiac reserve = Max % by which CO can be inc above normal.
6.	Circulation in heart is maintained by = Local metabolites
7.	During exercise increased supply to muscles is via = Local metabolites.
8.	First heard sound is produced during = Isovlumic contraction
9.	Hot sunny day, sudden collapse = Excessive sweating
10.	Immediate effects of severe hypotension = Oliguria
11.	In exercise, the venous returns to the heart by = Muscle pump in calves
12.	In IV drugs abusers = Bacterial Endocarditis (Staph Arueus)
13.	Most commonly involved heart valve in any cardiac disease = Mitral valve.
14.	Pacemaker of Heart = SA Node (Reason for being master is, SA node generates impulses at faster rate, if asked, never be confused by points like automaticity etc).
15.	Parasympathetic stimulation = Decreases HR.
16.	Patient with beta blocker ECG show increase PR = Drug induced block
17.	Post MI peripheral cyanosis scenerio cause = Decrease cardia output.
18.	S2 in comparison to s1 sound = Inc. Frequency (S1 has inc dullness and duration than S2).
19.	Smoking is associated with = thromboangiitis obliterans (it is also called BUERGER disease).
20.	St elevation v4. Artery involved = LAD (Note, that it's the most commonly involved artery in CAD).
21.	Ventricular filling-= 3rd heart sound (S1 = isovolumic contraction, S2 = isovol relaxation & S4 = atrial kick.
22.	Which is most imp indicator of muscle protein loss = Urinary nitrogen
23.	Which of the following is not a feature of shock = Increased urine output
24.	Regarding pulse pressure: Diff between systolic and diastolic
25.	Mid diastolic murmur occurs due to mitral valve
26.	Regarding heart: ventricles shorten from apex to base
27.	High cardiac output failure: thiamine def (others r severe anaemia, hyperthyroidism, AV fistula)
28.	Heart sound produced by rapid ventricular filling in third
29.	Shorten PR interval seen in WPW
30.	Mean arterial pressure depends on total peripheral resistance and cardiac output
31.	Less likely cause of cardiogenic shock hypovolemia
32.	Regarding stroke volume: Determine cardiac output
33.	Regarding systemic filling pressure: Inc venous return
34.	Fastest conduction: Purkinje fibers
35.	Regarding cardiac output: Measured by fick principle
36.	Atrial systole: A wave occurs at PR interval
37.	Regarding pcwp: Indirect measure of left atrial
38.	Young patient comes in opd, O/E radial pulse collapsing with diastolic murmur: Aortic regurgitation
39.	ECG of patient shows PR interval increased followed by dropped heart beat patient suffering from: Mobitiz type 1
40.	If ejection fraction increased then following decreased: ESV
41.	T wave on ECG: Ventricular repolarization

42.	Maximum pressure in aorta during: Slow ejection (BRS physio BCQ)
43.	Cardiac muscle can't tetanise because: Long refractory period
44.	TPR is due to: Vasomotor tone
45.	If EDV decreases than what should be increased: Venous return
46.	Venous return depends on cardiac output (frank starlings' law)
47.	ECG shows prolonged PR interval and QRS comes after every 3 P waves: mobitz type 2
48.	Pre-potent potential: SA node
49.	PHASE of cardiac cycle during 2/3 rd ventricular filling: Rapid filling
50.	Venous return during exercise increased by: Muscle contraction of leg
51.	Turbulent flowduring ventricular rapid filling give rise to: S3
52.	Maximum atriovenus shunt present in = Heart
53.	C wave on jvp shows: Right ventricular contraction
54.	Patient presents with bradycardia low volume pulse and hypotension: AV block
55.	Adam stroke: High degree heart failure with neurological signs
56.	A wave on ECG shows: Atrial depolarization
57.	Cannon a wave appears in: Complete heart block
58.	On jvp absent wave for mitral stenosis: A wave
59.	Highest resistance in blood flow: Arterioles
60.	Av bundle: Connection between atria and ventricle
61.	Cardiac contusion can be detected in ECG
62.	Patient with Post MI peripheral cyanosis: Decreased cardiac output
63.	Patient with chest pain and fever not related to respiration: Myocarditis
64.	MI sensitive cardiac marker: Trop T (ref Davidson)
65.	Gap junction present in: Cardiac muscles
66.	Mitral stenosis best heared at: Apex
67.	Young child increased b.p in upper limb while dec in lower limb: Post ductal coaractation of aorta
68.	Characteristic of Polyarteritis nodosa is: Fibrinoid necrosis:
69.	Patient with retrosternal chest pain ECG shows ST elevation with normal cardiac enzymes: Pericarditis
70.	Middle age male with sudden onset of chest, sweating and hypotension: MI
71.	Young pt with wrist pain, sore throat and dyspnea investigations: ASO titre
72.	10yr child fall on ground while playing in ground post-mortem shows aneurysum: Kawasaki disease
73.	60yr female having right sides temporal headache, temporal artery tenderness: Giant cell arteritis
74.	Characteristic feature of Rheumatic fever: Mitral stenosis
75.	Soap bubble appearance on x-ray: Giant cell
76.	Myxoma most common location: Left atrium
77.	Myxoid degeneration: Mitral valve prolapsed
78.	Most common cause of subacute endocarditis → S. viridans
79.	Microscopic feature of Polyarteritis nodosa: Fibrinoid
80.	Patient with upper respiratory tract infections, chest pain: Pericarditis
81.	Most common cause of hypertension: Idiopathic
82.	Foam cell macrophages accumulation: Atherosclerosis
83.	Patient has tearing chest pain unequal b.p in arm and mediastinal widening: Aortic dissection
84.	Post MI patient develops fibrinous pericarditis: Dressler syndrome
85.	Hypertrophic obstructive cardiomyopathy associated with: Friedrich ataxia
86.	Drug of choice in hypertrophic obstructive cardiomyopathy: Digoxin
87.	Young athelete during exercise suddenly die: Hypertrophic obstructive cardiomyopathy.
88.	First sign of shock: Tachycardia
89.	Patient with prosthetic valve develop endocarditis: S. epidermidis
90.	Aschoff bodies granuloma with giant cell: Rheumatic fever
91.	Commonest cause of death in RF: Myocarditis

92.	Turner syndrome and lymphatics: Cystic hygroma
93.	Diagnostic criteria for temporal arteritis: Biopsy
94.	Polyarteritis nodosa associated with:h = Hep.B
95.	Middle age smoker and auto amputation: Burgers disease
96.	ANcA associated with: wegners granulomatosis
97.	A patient with severe chest pain with ST elevation = Dissecting aorta
98.	Within 1 hour of acute MI enzyme raised = CK-MB
99.	After 4 hour of acute MI marker raised=Trop T
100.	A patient with complaint of chest pain from 30 minutes, ECG shows: change in V1-V4=Anterior wall MI
101.	Ischemic change in lead II, III, AVF=Inferior wall MI
102.	Left ventricular failure will leads to=increase pulmonary arteriolar pressure.
103.	A man died 5 days after MI and large blood clot in pericardial sac=pericardial tamponade
104.	Strawberry hemangioma=regress spontaneously by 5 yr
105.	Most serious side effect of diphtheria toxin is on=heart
106.	Trop T is preferable to CK-MB in the diagnosis of acute M.I more specific more sensitive it is.
107.	The severity of, mitral stenosis is clinically best decided by=length of diastolic murmur
108.	Pulmonary arterial pressure increases with=hypoxia
109.	IV sedation is given to a patient true about its arm-brain circulation=60sec
110.	Carotid bodies respond to=increased blood CO2
111.	Pulse pressure increased in=Aorta
112.	Aldosterone is stimulated by=increased serum K
113.	After loss of 1 litre of blood in 5 mint, what will happen=increased venous spasm
114.	Secretion of K in Renal cells occurs in=metabolic alkalosis
115.	When renold no. exceeds 3000=velocity inc and viscosity dec.
116.	Stretch receptors in atria=natriuresis (ANP will release)
117.	In CCF=Increased pressure in venous system
118.	Chemoreceptors respond to=increased PCO2
119.	ECG changes can't be seen in=sleep
120.	Central venous pressure -=increased in straining
121.	Change from lying to standing position=venous pressure increases
122.	Cardiac index is=cardiac output to body surface area
123.	Cell in complete venricular depolarization phase=ST segment
124.	JVP differentiated from carotid pulse by=pulsation varies with respiration
125.	Cardiac output decreased in all except=sleep (see table given by ganong ref)
126.	Notch of dicrotic pulse=atrial systole
127.	70% O2 extraction=cardiac muscle
128.	Saw tooth appearance=atrial flutter
129.	Biggest reservoir of blood=veins and venules (feb 2015)
130.	An athelete at rest has=increased stroke volume (april 2015)
131.	Increase in extracellular expansion causes=ANP release
132.	Difference between first and second heart sound=frequency
133.	Organ with highest arteriovenous difference=heart
134.	Blood flow to muscle is maintained by=Guanathidine
135.	Cardiovascular complication of HIV infection=pericardial effusion
136.	Not a feature of hyperkalemia=presence of U waves
137.	Feature of hypokalemia =U wave
138.	High pitch diastolic sound = Opening snap
139.	During cardiac imaging the phase of minimum motion of heart is = Mid diastole
140.	Autoregulation is not seen in = Skin
141.	Chest pain = Aortic stenosis (nov 2014)
142.	Amiodorone = Class 3 antiarhytmic drug (5 jan 2015 med)

143.	Blood supply during exercise doesnot decrease in = Coronary circulation
144.	Correct order of activating after stimulation of purkinje fibers = Endocardium, epicardium, upper most part of septum.
145.	Cardioinhibitory center = Nucleus ambigus
146.	Normal ejection fraction = 65%
147.	ECG wave are predominantly negative in = AVR
148.	Lowest PO_2 = Umbilical artery
149.	Greatest blood flow per 100gram of tissue = Kidney (ganong Bcq)
150.	First physiological response to high temperature = Vasodilation
151.	Diastolic pressure in right atrium = 0 mmhg
152.	Flight and fright response will cause = Decrease airway resistance
153.	Blood pressure increased from 140/80 to 160/100, change in csf will be=no change
154.	Slow repolarization of papillary muscle = U wave
155.	Atrial flutter = Treated with defibrillation shock therapy
156.	RMP of heart more depends on = K equilibrium
157.	Immediate event following bleeding from arteriole = Constriction of blood vessels.
158.	In aortic aneurysum which structure not compressed = Phrenic nerve
159.	RMP achieved by = Diffusion of K outside the cell
160.	Patient is pregnant and suddenly fants, positioned in left lateral and not right lateral to avoid compression to which abdominal structure = IVC
161.	Apex of heart=8cm from median plane (November 2014)
162.	Compression effects on esophagus by enlargement of = Left atrium (feb 2015)
163.	Pregnant full term eclamptic patient presented in ER with b.p 180/110 treated by = Hydralazine
164.	Infective endocarditis diagnostic investigation = Blood Culture
165.	Increase in cardiac output with increase in venous return = Starling law
166.	Inf wall MI = Right marginal artery (CPSP Key)
167.	Aortic Valve closure outset = Isovolumic relaxation
168.	Myxoma most common location = Left atrium
169.	Regarding bain bridge reflex = Increase heart rate
170.	Regarding B1 agonists = Increase heart rate
171.	Scenerio about CCF reason for edema = Inc hydrostatic pressure.
172.	Cardiac output low in = Heart failure
173.	High out cardiac failure = Beri beri (other causes are hyperthyroidism, AV fistula, severe anemia)
174.	Cardiac output is maximum = After delivery (ref guyton graph)
175.	Cardiac output main determinant is = Venous return (frank starlings' law)
176.	EDV = 120 ml
177.	Local metabolite in coronary circulation = Adenosine (5 jan 2015)
178.	Biggest reservoir of blood = Vein n venules (feb 2015)
179.	Venous return decreases = Skeletal muscles paralysis
180.	Pulmonary wedge pressure = Indirectly measures left atrial pressure.
181.	CVP decreases in = Gram negative septicaemia (ref ganong)
182.	Difference between septic and hypovolemic shock = Increase in cardiac outputs see table of shock in theory of CVS chapter, I have given and is very important.
183.	A person standing at same place for 1 hour what will decrease = CVP (ganong BCQ)
184.	Person with atrial fibrillation absent JVP wave is = A wave

GIT

PAST PAPER BCQ'S WITH QUICK REVIEW

1.	Antacid decreasing gastric motility = Aluminum hydroxide (note that, aluminium causes constipation while Mg causes diarrhea.
2.	In western population most, common cause of macrocytosis = Alcohol (if asked in our country then prefer liver disease)
3.	Baby Diper gets yellow due to = Biliary atreasia
4.	Commonest cause of hepatocellular carcinoma in developing countries = Both Hepatitis B & C (if Hep B plus Hep C collectively not mentioned then click only Hep B ref MRCP pass med)
5.	Gastric lymphoma ass with = H pylori gastritis
6.	Gastrin secretion is inhibited by = Somatostatin
7.	Bile duct obstruction in pregnancy = most specific is **GGT**. **Explanation:** GGT → Intrahepatic or extrahepatic obstruction to bile flow. Increase alp normal ggt → Liver is not involved Increase ggt and increase alp → liver is involved(cholistasis). ALP can also be increase by placenta during pregnancy. Alp can also be raised in pagets ca prostate...etc.
8.	Maximum absorption of water = Jejunum
9.	Monitoring of HEP B virus can be done via = SGPT (or ALT)
10.	Most drugs are metablized in = Liver
11.	Most fluid loss will be through: = Colon
12.	Patient with old history of adenocarcinoma of colon is operated for polypectomy, on histologic evaluation pathologist labelled it as benign growth with no chances into malignant transformation, it would be = Tubular adenoma.
13.	Pregnant lady with bile duct obstruction. Diagnostic investigation = GGT
14.	Pregnant with jaudice. Went to remote village. To see her parents. Cause = Hep E (note that commenset hpatitis is hepA anywhere, but if asked remote area, or epidemic or deadly in pregnancy prefer hep E.
15.	Somatostatin act on beta cells by = Paracrine action (The GI Paracrines are, somatostatin and histamine, they defuse over a short distance to act on target cells)
16.	Which of the following prolong use of drug will cause persistent increase in Gastrin secretion = PPI (Feb 2015)
17.	Patient with fluid loss now show metabolic acidosis e hypokalemia most fluid loss will be through = Colon
18.	Young adult with raised ALP, jaundice and decreased Hb Scenario = Pigmented stones
19.	Amoeba causes lesions in which part of gut = Cecum
20.	Appendicular Artery is a branch of = Iliocolic Artery (Ref Rj Last)
21.	Layer of the viscera from outermost to innermost = Muscularis mucosa
22.	Fecal incontinence after trauma damage to = External anal sphincter
23.	Level of lead in blood is estimated by = Absorption from GIT
24.	Doesnt act via receptors = Aluminuim hydroxide
25.	Terminal ileum resection = Inc loss of water in feces
26.	Rt colectomy done pt on Parentral Nutrition what will happen = Hyperglycemia
27.	Which parasite is not transmitted thru orofecal route = Trichenella Spiralis
28.	Which of the following increases lower eosophageal tone and speeds up gastric emptying time = Metoclopramide
29.	Highest bioavailability of anti emetics = Metacloprmide (Feb 2015)
30.	A newly married female came with pain in rt illiac fossa her TlC 12000 she has fever n vomiting her lmp was 3 weeks back what is, Diagnosis = Acute Appendicitis
31.	Gastrin secretion is inhibited by = Somatostatin

32.	Hydroxyindoacetic acid in urine = Carcinoid syndrme
33.	About small intestine true is = Small intestine 6-8 meters long
34.	Maximum absorption of salt and water → Jejunum (ganong bcq)
35.	Inc gastric motility is done by = Gastrin
36.	CCK causes nhibition of = Gastric Emptying
37.	CCK causes contraction of = Gall bladder
38.	Steatorrhea, deficincy of Pencreatic enzyme = Lipase
39.	Bile Salts absorbed in= Terminal ileum
40.	Gluconeogenesis stimulate by = Glucagon
41.	GIP causes release of = Insulin
42.	Layers of smooth muscle is presnt in = Fundus of stomach
43.	Difference between primary and secondary peristaltic wave = Primary Peristaltic waves have no intrinsic nerve input involved.
44.	Defecation occurs due to = Gastrocolic Reflex
45.	Right Iliac Fossa Pain less than 24 hours, appendectomy is done and sample is given to pathologist. The Pathologist says inflammation is limited Serosa = Acute mild Appendicitis
46.	Oral glucose/ carbohydrate load increases which hormone = GIP
47.	Cimetidine given pre operativey because = Reduce gastric acidity
48.	Which of the following secretion has Highes pH(basic) = Pancreatic juice
49.	Mass movement is affected in colon due to problem in = Auerbach plexus
50.	Primary esophageal peristalsis is different from secondary by = Presence of oropharyngeal phase
51.	Ant Duodenal perforation where will secretion go = Right Illiac Fossa
52.	Chronic gastritis or gastric lymphoma ka cause = H. Pylori
53.	Abdominal angina cause by obstruction to = Sup mesenteric
54.	Middle colic is the branch of = Sup mesenteric
55.	Middle rectal artery branch of = Internal iliac
56.	Patient with fluid loss now show metabolic acidosis with hypokalemia. most fluid loss will be through = Colon
57.	Amoeba causes lesions in which part of gut = Ceacum
58.	Which vein is involvd in portal hypertension = esophageal
59.	True about Choriostoma = Pancreatic tissue in stomach
60.	Lower esophageal sphincter = Relax while eating
61.	Gut rotation = 270 degree clockwise
62.	Appendicitis, pain around umbilicus through = Sensory through T10
63.	Parasympathetic action= Major effect on salivary gland secretions
64.	In an adult Ileactomy and jejunectomy has been done. He has diarhoea and15-20 bowel sounds per minute. The most likely cause of this decreased transit time in the intestine is due to = Secrtroy plus osmotic
65.	Peptic ulcer profusely bleeding from posterior wall of duodenum...which artery involed = Gastroduodenal
66.	In pyloric stenosis = Hypokelmic hypochloromic metabolic alkalosis.
67.	Pacemaker of GiT = Interstial cells of cajal
68.	Jejunumis supplied by = Superior mesenteric artery
69.	What is used for traveller's diarrhea = Diphenoxylate
70.	Hamartoma is toally = Benign
71.	Highest pH = Pancreatic jauice
72.	Inc salivary secretion = Acetylcholine
73.	Intrinsic factor secreted from = Gastric fundus
74.	Diarrhea cause a. Metabolic acidosis with = Normal anionic gap
75.	Bile salt absorb in = Terminal Ileum
76.	Long chain fatty acid absorption = Jejunum
77.	Short chain fatty acid in = Colon
78.	Premalignant condition = Dysplastuc nevious syndrome
79.	Common complication of bettle nuts = Fibrosis of submucosa

80.	A 2 years boy presented with pallor and bowel disturbance. No physical findings seen. What lab investigation to be done = Serum Vit. 12
81.	Gastric HCL from parietal cells is needed for = Conversion of Pepsinogen to pepsin
82.	Premalignant lesion = Seborrheic keratosis
83.	Gastric lymphoma most probable cause = H. pylori
84.	In a surgery 10 cms of ileum was resected. what will be the outcome = Less absorption of bile salts
85.	Resection of terminal ileum leads to= Less absorption of bile salts
86.	Ileostomy leads to= Water loss
87.	Substance released from neuron in GI Tract and produce smooth muscle relaxation = VIP
88.	Vibrio Cholera causes diarrhea because = It increases Chloride secretory channels (nov 2015 medicine)
89.	Substance inhibited by low Ph = Gastrin
90.	H2 antagonist = Blocks both gastrin and vagal induced acid secretion.nov 2014 medicine
91.	Total surface area of small intestine = 350sqm
92.	Absorptive surface area of small intestine = 250sqm
93.	Peritonitis only = E.coli
94.	Pyogenic peritonitis = Bacteroids
95.	Peritonitis secondary to gynae and surgical procedures = Bacteroids
96.	Vomiting centre = Medulla oblongata
97.	Indirect bilirubin raised in = Haemolytic anaemia
98.	World wide most common cause of hepatocellular carcinoma = Hep. B (Ref pas medicine)
99.	Common cause of HCC in developing countries = Hep. B & Hep. C
100.	Remote area most common acute hepatitis = Hep E
101.	In children most, common hepatitis = Hep. A
102.	Most chronic hepatitis = Hep. C
103.	Most common hepatis for cirrhosis = Hep. C
104.	E for epidemics e for Hep. E
105.	Most common in pregnancy is = Hep. A

ENDOCRINOLOGY

PAST PAPER BCQ'S WITH QUICK REVIEW

1.	Patient with bone pains having normal Calcium, Inc Alkaline phosphatase most likely suffering from = Pagets Disease
2.	Adh and oxytocin arise in = hypothalamus
3.	Decrease Insulin will = Ketogenesis in Liver
4.	If asked Max Growth hormone increase=If in options both sleep and exercise are mentioned, then prefer Exercise, max growth hormone secreation occurs during strenuous exercise (Guyton table)
5.	Osteomalacia = Vit D dec → dec Ca& phosphates → inc PTH & ALP
6.	5% dextrose in large amount given = ADH inhibition
7.	ADH is inhibited by = Alcohol
8.	Adrenocortical deficiency causes = Hyponatremia (the job of mineralocorticoids is to reabsorb sodium, thas how the deficiency of mineralocorticoids may result in hyponatremia).
9.	Angiotension II exerts its effects by activating = Aldosterone
10.	Bilateral exopthlmos, antithyroid antibody present = Graves.
11.	CHO, Protein fat synthesis hormone = Insulin.
12.	Delayed action of insulin = stimulate mRNA trcription for lipogenesis
13.	Distruction of Ant pituatary gland causes dec. functioning of = Glomerulsa fasiculata
14.	Dka pt. Died. Which fungal inf. = Mucurmycosis.
15.	Due to stress of surgery inc = ACTH (ACTH is stress hormone, but if cortisol is there in options, prefer that).
16.	During lactation, Amenorrhea is due to = Inhibition of LH and FSH
17.	Estrogen, Progesteron and Testosteron acts Via = Transcription: All steroid hormones act on Genes as they can easily cross membrane and need no cell surface receptors
18.	Feature of Rickets and Osteomalacia is = Decreased bone density
19.	Growth hormone is maximally rasies in = Exercise.
20.	Hydroxyindol-acetic acid in urine = Carcinoid syndrome.
21.	Married man had no children for few years and was diagnosd as sterile with azoospermia wat is investigatn of choice = Serum FSH and LH
22.	Old woman with swelling on external earshe also had gout wd -ve bifringent type crystals scenario was given = Monosodium urate.
23.	Oxytocin and vasopressin originated from = Hypothalamus
24.	Pt with HTN, LVH, Creatinine 0.8, Urea inc, BSF 88mg% with urinary sugar ++, Na 140, K 2.5. Cause of HTN = Hyperaldosteronism (the function of aldosterone is to reabsorb sodium and excrete hydrogen and potassium, that's why in hyperaldosteronism, K is depleted and there is alkalosis, and Sodium level won't fall because water is absorbed along with Na).
25.	Regarding Pseudoypoparathyroidism = Hypocalcemia (Pseudohypoparathyroidism →Autosomal dominant disease; End-organ resistance to PTH (includes its ability to synthesize 1-α-hydroxylase in the proximal tubule) Mental retardation, basal ganglia
26.	Sertoli cells function = Androgen binding protein.
27.	Somatostatin acts on beta islet cells = Paracrine.
28.	Testosterone main function = Inc muscle and bone growth.
29.	The most common type of salivary gland tumor is = Parotids
30.	Thyroid hormone increas = Free fatty acids
31.	Which of the following does not increase in stress for surgery = Insulin
32.	Calcium excretion of kidney does not depend on = Ca secretion by distal tubules
33.	PTH most sensitive to = Ca++
34.	Hormone involved in lymphocyte production = Thyroid cell

35.	Anterior Pituitary Acidophils produce = GH
36.	Concentration of which hormone does not change in pregnancy = Growth hormone
37.	In pregnancy growth hormone production not increased bcz growth is under influence of = Human chorionic somatomamotropin.
38.	Which hormone causes extrahepatic protein catabolism and hepatic protein anabolism = Cortisol
39.	Insulin increased by = Growth hormone
40.	Growth hormone cause hepatic glycogen synthesis
41.	Hormone responsible for oxidative phosphorylation and inc in body temperature = Thyroid hormone
42.	Hashimoto thyroiditis = Anti microsomal and anti thyroglubulin
43.	Regarding Adipose tissue = Inc in size by dividing adipocytes.
44.	Propranolol acts as anti thyroid drug bcz = Beta receptor blocker
45.	Hypothyroid pt on thyroxine, best marker to monitor thyroid status = TSH
46.	Mechanism of action of propylthiouracil = Blocks the synthesis of thyroid hormone.
47.	Which is not involved in regulation of Ca = Lungs (ganong bcq)
48.	Growth hormone synthesis and release is stimulated by = Arginine
49.	Regarding growth hormone = Initiates growth of bone and cartilage by somatomedins.
50.	The hormone which produces protein anabolism in the liver and protein catabolism in other tissue is = Cortisol
51.	Most likely cause of hypercalcemia in malignancy = PTHr peptide (ref robins)
52.	A hormone produces glycogenolysis, gluconeogenesis, ketogenesis and hyperglycemia. This hormone is = Glucagon
53.	Thyroid hormone recptos present on = In the nucleus
54.	Activity of osteoclasts in the bone is inhibited by = Calcitonin
55.	Patient with tachycardia and Palpitations, TSH low, after giving Thyrotropin TSH is Increased, cause is = Problem in Thyroid
56.	Target tissue for PTH = Kidney
57.	Pt wth bone pains having normal serum Ca nd inc ALP... he is likely suffering from = Paget disease
58.	Growth hormone uses which as main source for energy production = Fat
59.	Most active thyroid hormone released into circulation = T3
60.	Whch of these stimulate erythroid stem cells to proliferate and differentiate = Erythropoiten
61.	Isthmus of thyroid gland lies against the tracheal ring = 2nd and 3rd and 4th ring
62.	Cause hepatic glycogen synthesis = Growth hormone
63.	All of the following hormones have cell surface receptors except = Thyroxine
64.	Most of the active form of thyroid hormone released into the circulation is = T3
65.	Iodine which is not used in the thyroid hormone syntheseis is secreted from body via = Urine
66.	Phosphorylase enzyme raise to cause glycogenolysis due to deficiency of = Insulin
67.	Delayed action of insulin = Protein synthesis
68.	PTU = Inhibits synthesis of thyroid hormones
69.	Other uses of thyroid hormone = Loose weight
70.	Immunostimulant hormone = Gh (till puberty)
71.	Concentration of which hormone does not change in pregnancy = GH

72.	Female symptoms of hypothyroidism and lymphocytes = Hashimoto Thyroiditis
73.	T3 and T4 Increased & TSH is Decreased = Primary Hypothyroidism
74.	Hypothyroidism increases = Serum cholesterol
75.	40 yrs lady hypothyroidism having mass-endrocrinologist advise FNAC, it shows increase lymphocytes = Thyroid lymphoma
76.	Young boy with loss weight loss and sleep problems → Hyperthyroidism.
77.	Growth hormone increase in hypoglycemia.
78.	A 60 years old patient having hypertension, diabetes with hyperthyroidism, which drug will be safe for him = Beta Blockers
79.	Lady with low serum calcium and high potassium, high plasma potassium and normal alkaline phosphatise = CRF
80.	Pt with moon facies excessive fat deposition at chest and abdominal areas, ACTH raised = Cushing disease
81.	Patient with trucal obesitry, Thin limbs, round face, raised ACTH = Cushing disease
82.	Which hormone causes smooth muscle constriction In Arteriols = ADH
83.	Under action of insulin glucose enters = Muscle
84.	Insulin dependant uptake of Glucose into = Skeletal muscles
85.	Delayed action of insulin → protein synthesis
86.	Glycogenolysis due to absence of = Insulin
87.	A patient comes to you in your clinic with lab findings of RBS 198 G/dl and FBS 122 G/dl what is your diagnosis = Impaired glucose
88.	Which of the following will be seen in Diabetes Insipidus = Reduced urine osmolality
89.	A 60 years old patient having hypertension, diabetes with hyperthyroidism, which drug will be safe for him = Beta Blockers
90.	Patient having 15 years of Diabetes, have decrease visual acquity and white spots and exudates on retina, most likely cause is = Diabetes Mellitus
91.	At end of Marathone race = Inc glucagon decrease insulin
92.	Insulin increased by = Growth hormone
93.	Oral glucose/ carbohydrate load increases which hormone = Gastric inhibitory peptide
94.	Uncoupling of oxidation reaction = Thyroisds hormone
95.	Which hormone causes extrahepatic protein catabolism and hepaticprotein anabolism = Cortisol
96.	Stress hormone = Cortisol
97.	During the night secretion of which hormone is increased = Growth hormone
98.	BMR dec in = Hypothyroidism
99.	Calcitonin produced by = Thyroid
100.	Somtostain release inhabit of = Gastrin
101.	Inc in insulin receptor of = Starvation
102.	Insulin dec by = Adrenline
103.	In a feotus the insulin secretion inc by = 3rd month
104.	Insulin dependent glucose transport through = GLt4
105.	Half life of insulin = 5 minutes
106.	Amanorrhea in lactating women is due to = Prolactin
107.	Menopause is associated with = Low estrogen and high FSH and LH.
108.	Initiation of labour = Fetal ACTH
109.	Hyperkalemia will increase the Secretion of = Aldosterone

110. Female met an accident, her son and husband died, afterwards she had night mares and amenorrhea = low dopamine
111. Superior Parathyroid gland = Lies at middle of posterior border/ surface of thyroid lobe at level of 1st tracheal ring
112. Exophthalamus is due to = Inc TSI
113. Which hormone act via cAMP Mechanism = Glucagon
114. Due to stress of surgery inc peripheral something is due to Secondary action from = ACTH
115. Isthmus infront of = Rings 2 3 4
116. Adult female breat atrophy = Estrogen.
117. Carbohydrate, protein, fat synthesis hormone = Insulin
118. Which hormone causes uncoupling of oxidative phosphorylation with increase heat production = Thyroid hormones
119. Which form of thyroxin is an active form = Unbound form
120. About follicular cancer of thyroid = Vascular invasion
121. Regarding un coupling of Oxygen that's produced by = Thyroid
122. During thyroidectomy superior thyroid artery is ligated close to gland to save = External laryngeal nerve
123. Slow growing tumor of thyroid = Papillary carcinoma
124. Parathyroid hyperplasia involves = Chief cells
125. Unilateral painless bulging of eye. blood profile normal. Radiologic study normal = Glioma of optic nerve
126. Hormone increased during Sleep as compare to at day wakefulness = GH
127. Glucose increasing factor release from pancreas = Glucagon
128. The most potent mechanism for increasing heat production = Shivering
129. Which of the following is not the characteristic of hypopituitarism = Cachexia
130. Which one of the following hormones is homologous to cck = Gastrin
131. In 15 years, old boy the medullary carcinoma of thyroid is considered familial because of = Age
132. Metastatic Calcification of kidney most commonly due = Hyper parathyroidism
133. In lactation GnRH inhibitionby = Prolactin
134. LH action which testicular cells mostly = Leydig cells
135. Diabetic nephropathy = Urine albumin
136. 20-year-old female presented with right sided cervical lymphadenopathy. She wascompletely asymptomatic, Histological examination reveal a metastatic tumor. The most likely primary carcinoma thyroid in this patient is = Papillary
137. Spermiogenesis is stimulated by → FSH and testosterone.
138. Phosphorylase enzyme raised to cause gylcogenolysis due to deficiency of which hormone = Insulin
139. Patient with tachycardia and palpitation, TSH is low but on giving TRH, TSH is increased. Problem is in = Thyroid gland
140. A 20-year-old male has dyspnea on lying down. The structure most likely to cause this is = retrosternal goiter
141. Calcitonin is tumor marker of medullary cell carcinoma of thyroid gland
142. Protein synthesis in muscles is increased by → Dihydrotestosterone.
143. Which hormones are responsible for milk production → Prolactin, oxytocin, cortisol

144.	Respiratory rate in pregnancy increases by → Progesterone.
145.	Non shieveing thermogeneisis is by → Noradreanline (ref guyton)
146.	Cortisol increases → Neutrophils
147.	Cortisol decreases → Lymphocytes.
148.	Not direct effect of cortisol → Facial hair growth.
149.	Greatest effect on plasma osmolarity is of which hormone → ADH (ref ganong)
150.	Polyphagia in diabetes is coz of → Satiety centre.
151.	Dopamine regulates → Prolactin.
152.	In Hyperthyroidism, before 1st trimester in pregnancy give PTU and after 3rd trimester give methimazole (ref. CMDT med 2016)

Renal System, Body Fluids & Electrolytes

Past Paper Bcq's With Quick Review

1.	Acute glomerunephritis proteinuria = Basement membrane defect
2.	Dec plasma proteins = Inc GFR
3.	High dextrose given what is inhibeted→ADH
4.	Greatest clearance is of = PAH (The order is PAH > Dietry potassium > inulin).
5.	Max increase in ECF Volume due to = Infusion of Hypertonic Solution.
6.	Not isotonic to plasma = 5% dextrose water
7.	Protein content less in glomerular filtrate occur due to = pore size and negative charge.
8.	When will you does dialysis with estimated GFR Decreases to = <5 % ref oxford.
9.	Which is more in dialyzing fluid as compare to plasma = glucose (composition of dialyzing fluid.
10.	Glucose & HCO_3 are more than plasma, if both asked prefer glucose.
11.	Na, K & Cl less than plasma
12.	Mg & Ca equal to plasma
13.	Urea, creatinine, sulphate and zero (Refrence guyton)
14.	Fasiculata → Cortisol and this one is under the control of pituitary
15.	Glomerulosa → aldosterone and this one is under the control of Angiotensin
16.	A man of 70 has recurrent UTI cause = Outflow Obstruction (Feb 2015 question)
17.	Following has high clearance value = PAH
18.	In crf unlikely = Hypophosphatemia
19.	Metabolic alkalosis is caused by →chronic hypoventilation.
20.	Max sodium absorption occurs in = PCT.
21.	Old age →chances of BPH → lead to outflow obstruction→ leading to recurrent UTI
22.	Urteric bud does not grow towards metanephric cap causes= Absent ureter
23.	Most common site for obstruction of in child = Uretropelvic junction
24.	Cause of death in potter syndrome = Pulmonory hypoplesia
25.	A child with twisted face low set ears diagnose = Potter
26.	Polycystic kidney disease in child = Autosomal recessive
27.	Horseshoe kidney get trapped under = Inferior mesenteric artery
28.	Collecting tubule of kidney drived from = Urteric bud
29.	Pct devlop from = Metanephrotic duct
30.	JG cells are = Smooth musculature cells of afferent
31.	Transitional epithum in = Renal pelvis
32.	Diff b/w right and left kidney =ralation of hilum
33.	Right renal vein drains into =IVC
34.	Left renal vein = Ant to arota
35.	Ant relation of left kidney = Body of pancreas
36.	Renal artery lies at =L1
37.	Left renal vein = Ant to arota
38.	Vassels post to pancreas = Splenic vein
39.	Ant relation of kidney except = Diaphragm
40.	Hilum of kidney does not contain = Part of adernal gland
41.	Not relatd with right kidney = Descending colon

42.	GFR increases with = Dec plasma protein
43.	Clinically GFR best measured by = Creatinine
44.	When GFR increases, absorption of Na and Water increases also through tubuloglomerular mechanism. How? = Increase pericapillary blood flow
45.	A young boy in RTA lost 1.5liter blood, thers much dec urinary output ngfr, which part of the renal tubule will bring bck the GFR n urinary output to normal = Thich ascending lemb
46.	Which of the following test is best described for GFR kidney = Insulin clearance
47.	GFR and RPF both increase in = Afferent dilation
48.	Gfr can be best estimated by = Cretinin clearance
49.	Increased GFR is caused by = Decreased Oncotic pressure.
50.	A drug causing increase GFR will do it by following mechanism = Increasing hydrostatic pressure.
51.	Inc plasma urea level in renal failure due to = Dec GFR
52.	If a 70 kg healthy adult loses one litre of blood within 5 minutes, there would be = Increased venous tone.
53.	Which of the following would cause an increase in both GFR and RPF = Dilation of afferent arteriole
54.	Patient with pyuria but has negative urine culture for organisms. This happens in all conditions except = Acute post streptococcal glomerulonephritis
55.	Least chance of renal stones is associated with = Hyperlipidemia.
56.	Anemia of CRF is treated with = Erythropoietin.
57.	Diagnostic test for streptococcuss is = Blood culture
58.	Wihch of the following causes renal lesion = Wegner graulomatosis
59.	Most common type of glomerulonephritis = IgA nephropathy
60.	Which one is responsible for net reabsorption of sodium in kidney = Aldo+ANP
61.	Conditions that stimulates secretion of renin may include = Vasopression secretion
62.	Most potent stimuli for renin release = Sympathetic outflow
63.	Renin is increased by = Decrease ECF volume
64.	Thirst is decreased by = Increase ECF volume
65.	Aldosterone is stimulated by rise in = Plasma K conc.
66.	Renin is incresed by = Increased K
67.	Thirst stimulated by activation of renin angiotensin system due to = Angiotensin 2
68.	Which of the following substance cause hyperaldosteronism in congestive cardiac failure = Renin (this bcq has come several times in papers)
69.	Not a feature of hyperaldosteronism = Metabolic acidosis
70.	Which receptor increase renin secretion = Beta 1
71.	A patient with acute blood loss, the mechanism triggered immediately would be = Baroreceptor Reflex
72.	ADH inhibited by = Alcohol (asked several times)
73.	Volume depletion which mechanism Is activated = Renin angiotensin
74.	The most likely cause of sec hyperaldosteronism in a 33-year-old alcoholic with cirrhosis is = Renin
75.	Most potent stimuli fr aldosterone release = Hyperkalemia
76.	Macula densa sensitive to = Na
77.	In a Road trafic accident patient loss 3L of blood over 10mint.He likly have = Inc Blood Renin Level
78.	Followingare the characteristics features of aldosteron secreting tumor except = Hyponatremia
79.	Macula densa is related to = Osmolar load deliver production.
80.	Which of the following will cause decrease in renin = Inc ECF
81.	Secondary hyper aldosteronism can occur due to = Increase renin
82.	Erythropoitin secreted by = Peritubular epithelial
83.	The release of aldosterone is triggered by = Increase in Potassium

84. JG cells are most imp.in = Countr current system.
85. Captopril decreases plasma conc of = Aldosterone
86. Erythropoietin is secreted by = Cells in the peritubular capillary bed.
87. Main action of angiotensin II = Vasoconstriction
88. Decreased angiotensin2 level is due to = Inc ECF
89. Dialysis fluid = Has more glucose than plasma
90. Renal dialysis makes the patient prone to = Hepatitis B
91. Atonic bladder etiology is = Parasympathetic efferent cut
92. Young female developed acute renal failure after post partum hemorrhage, which part of the kidney is most likely damaged = Proximal convuluted tubules
93. Diagnosed case of CRF is on dialysis. Labs report shows anemia. What should be given = Erythropoitin
94. In the presence of adh, water is maximally reabsorbed from = PCT
95. A pt was given 5% dextrose water this wil inhibit = ADH
96. ADH acts at = Collecting ducts
97. Concentrating the urne is function of = Vasa recta
98. Thirst is dec by = Barorecptor afferent (CPSP key)
99. In summer a fasting man has concentrated urine because = ADH
100. Which of following has greatest effect on Na excretion = ANP
101. Patient with severe diarrhea = Metabolic acidosis with normal anion gap
102. Central nervous system manifestations in CRF are result of uall of the following Except = Hyper osmolarity
103. The anion gap is decreased in = Hypoalbuminaemia
104. Man, with severe diarrhea = Metabolic acidosis with normal anion gap
105. Patient with PH 7.4, Po2 8Kpa, Pco 8Kpa, PCO_2 = Resident of high altitude
106. Tetany may occur as a comlication of = Hypercapnia
107. A 3-month-old infant brought 2 emrgncy in ill condition. Blood gases and electrolytes show, ph7.22, PCO_2, 32, HCO_3, 14, Na 142, k 2.6. Most likely diagnosis = Renal tubular alkalosis.
108. Pt wid pO2 60mmHg, pH 7.4, PCO_2 40 Dx = Compensated metabolic acidosis
109. A plumber has history of dyspnea and cough now PH 7.4 bicarb 19 PCO2 31 PO2 62. wats diagnosis = Compensated resp alkalosis.
110. Most common nephrotic cause of acute tubular necrosis is = Aminoglycosides
111. Most common cause of intrarenal azotomia = ATN
112. Which of the following progress to renal papillary necrosis = Acute interstitial nephritis
113. A patient present with flank pain and gross hematuria and past history of chronic asprin abuse diagnose = Renal papillary nephropathy
114. A nephrotic patient has inc risk of Infection because = Hypogammaglobunemia
115. Nephrotic syn associated with Hodgkin lymphoma = Minimal change disease
116. Most common cause of nephrotic syn in HIV patient and herion abusers = Focal Segmental GN
117. Nephrotic syndicated associated with Hep B and Hep C = Membranous nephropathy
118. In Good posture synd immunofluorescence pattern = Linear
119. Alport synd defect in = Type 4 collegen
120. A patient present with visual distrubance, hearing loss, hematuria diagnoses = Alport Syndrome
121. In chronic renal failure occur = Hyperkelmia
122. A child present with large unilateral flank mass with hematuria and Htn = Renal cell Carcinoma.
123. A patient comes to you in ill conditions his blood pH 7.3, PCO_2 is 44 HCO_3 is 17 meq/l diagnose = Metabolic acidosis.
124. Least likely occur in renal failure = Hypo phosphatesia
125. Main function of ECF is = Transport electrolytes
126. ECF differ from icf in = High conc of na and ca

127.	Aldosterone release inc in = Hyperkelmia
128.	Erythropoietin always raised in = Hypoxia
129.	Acute renal failure most effect a = PCT
130.	Imp buffer in interstial fluid = H_2CO_3
131.	H ion sec from nephron is inc by = Alkalosis
132.	Increased osmolarity .... Tip of loop of henle
133.	Decrease osmolarity.....Early DCT & macula
134.	Diluting segment .... Thick ascending limb Concentrating segment
135.	CCD (vasa recta) Concentrating urine, Function of Vasa Recta Concentrating urine in summer or during fasting... ADH
136.	DCT....Impermeable to water
137.	Loop diuretics act on Thick ascending limb
138.	Thiazide diuretics act on Early DCT
139.	Both together act on...DCT & CT
140.	Osmotic diuretics act on PCT
141.	Renal columns contain... Interlobar artery.
142.	Prone to ischemia....PCT
143.	Maximum water absorbtion in presence of ADH → PCT
144.	Maximum water absorption in the absence of ADH → PCT (this and above BCQ is taken from Ganong in the presence or absence in both form max water is absorbed in PCT)
145.	Potassium loss due to dietry irregularities .... Distal tubules
146.	H secretion in PCT is related to HCOe reabsorption
147.	After blood loss GFR & urine out put is increased by.... THick ascending limb
148.	Asthenuria... Decrease tubulointerstitial feedback (increase plasma osmolarity / increased fixed sp. gravuty)
149.	Juxtamedullary nephrons.... Vasa recta
150.	Juxtamedullary nephrons... not supplied by peritubular capillaries
151.	ADH...Acts on osmoreceptors / DCT ADH....Increase Urea transport to DCT ADH.... inhibited by alcohol
152.	ADH... regulates plasma volume / urine osmolarity ADH...V1 receptors cause vasoconstrictio ADH...V2 receptors act on kidney
153.	Highest tubular transport maximum.... Lactate
154.	Least Clearance...Glucose
155.	Threshold for Glucose....180
156.	Glucose appears in urine.... 250
157.	Erythropoeitin secreted by peritibular capillaries... if not mentioned then mesingeal cells
158.	Amino Acid deficiency causes cell injury...Glycine
159.	Amino acid cause injury to cell.... choline
160.	Amino Acid causing renal stones.... Lysine
161.	Amino acid in abnormal metabolism.... Tryptophan
162.	Isotonic loss...sodium remains same
163.	Hypotonic loss.... Hyponatremia & ICF volume increases
164.	Hypertonic loss.... hypernatremia, ICF volume contracts
165.	Na/K/cl at basolateral membrane
166.	ACE at luminal surface of endothelial cells
167.	Kidney podocytes...at visceral layer of bowman capsule
168.	Cresents formed by parietal cells linning bowman capsule
169.	Paracetamol & sickle cell anemia... cause renal papillary necrosis
170.	Renal calyses in normal VP.... 7
171.	Renal segments....5
172.	Capacity of renal pelvis... less than 5ml
173.	Fanconi Anemia... BRCA 2 mutation

174.	Na/H & Cl/HCO_3.... Hypertonic cell volume regulation
175.	K efflux from cell.... Hypotonic cell volume regulation
176.	Smller system in B.P contro.... tubuloglomerular feed back
177.	Long term B.p regulation.... Kidney
178.	Maximum consumption of O_2 ...Liver
179.	Countercurrent multiplier requires .... hypertonic medullary interstitium
180.	Countercurrent multiplier requires...maintaned by vasa recta
181.	After 2-liter fluid loss, person drinks plain water ... increase ICF
182.	1-liter blood loss in 5 min.... Increased venous tone
183.	Lost 8 percent blood in 30 min, Volume significantly reduced...Capillary blood
184.	PKD most common death id due to RENAL FAILURE PKD... associated with Berry Aneurysm & Renal failre
185.	Secreted from kidney... 1,25 dihydrocholecalciferol, Renin, Erythropoeitin
186.	Not secreted from kidney... Angiotensin 1
187.	Angiotensin ... Increases extracellular K (moving K out of cell) Maintainance of ECF k... Na/ K pump
188.	Most COMMON shift of K to ECF....Strenous Exercise
189.	Main action of Angitensin 2... Vasoconstriction
190.	Decrease Angiotensin.... Increases ECF volume
191.	Dialysis pt are Prone to develop... Hepatitis B
192.	GFR measure clinically / best estimated ... Creatinine clearance
193.	GFR best Way to measure.... Inuline
194.	Best way to measure RPF... PAH
195.	Best test for renal failure... Creatinine clearance
196.	Pyuria Culture negative... Poststreptococcal glomerulonephritis
197.	Persistent pyuria.... PKD & Urine at room temp. e alkaline PH (not cause by Poststreptococcal glomerulonephritis)
198.	Renin... produced by JG cells
199.	Renin...Long term B.P regulation
200.	Renin...secretion may be stimulated by vasopressor secretion Renin most potent stimulus for release is sympathetic outflow Renin. increased by ACE inhibitors, increase K, B1 receptors. Renin...secretion INVERSLY related to Na & Cl in DCT
201.	Immunoflorescence Granular... PSGN, SLE, Diffuse prolf. GN, Membrane prolfi. GN Sub Endothelial deposits...SLE, Diffuse prolf. GN, Membrane prolfi. GN
202.	Sub epithelial deposits...PSGN
203.	Intramembranous Deposits...Diffuse prolf. GN, Membrane prolfi. GN type 2
204.	GB Thickening.... Membranous GN (IC deposit), D.M (type 4 Collagen)
205.	Rapidly progressive GN associated with ...Good pasture, Micrscopic polyangitis (p ANCA)
206.	Focal segmental Glomerulonephritis ... M.C.C of nephritis in Adults, associated with HCV > IV
207.	Drug abusers, Bad prognosis, Leads to CRF.
208.	First sign of DM Nephropathy... Microalbuminuria Medullary sponge kidney... swiss cheese appearance Streptococcal infection ... Blood culture
209.	Streptococcal infection initial test.... ASO titer
210.	Renal lesions in Wegner's Granulomatosis
211.	Most common ...IgA nephropathy
212.	Hyperaldosteronism.... increased Na, decreased K & Renin, muscle weakness, MET. Alkalosis, HTN.
213.	Most potent stimulus Hypovolemia... Renin Angiotensin
214.	Most potent stimulus Osmolarity....ADH
215.	Most potent stimulus for Aldosteron... K >>> Renin
216.	Mecula Densa sensitive to Na & osmolar load delivered to DCT

217.	CNS manifestations in CRF due to... Hypocalcemia, Hyponatremia, Acidosis (not due to hyperosmolarity)
218.	Tetny occurs in respiratory Alkalosis / HYpercapnia
219.	Born with PKD ... Autosomal Recessive
220.	When ureteric bud doesn't grow towards metanephric cap.... Absent ureter
221.	Sodium Absorption.... Aldosteron
222.	Sodium excretion...ANP
223.	Net sodium absorption → Aldosterone + ANP but MOLE for MOLE Sodium Absorption → Adldosterone.
224.	Serum osmolarity .... 300 m osm
225.	Glomerular cappilary pressure increases due to short afferents
226.	Major buffers body / ECF....HCO_3
227.	In Renal tubules.... Phosphate
228.	In ICF...proteins
229.	In RBC....Hb
230.	Acute Hemorrhage, sequence of replacement.... Plasma volue > Electrolytes > R.B.C Plasma Osmolarity increase in... Water deprivation
231.	Plasma Osmolarity decrease in... SIADH
232.	Plasma Osmolarity decrease by ...Injection of ADH
233.	1-liter blood loss.... Negative feedback
234.	2 Liter blood loss (stage 3 to 4) .... Decrease Stroke Volume
235.	Renal excretion of drug... Affected by glomerular filteration

RESPIRATORY SYSTEM

Past Papers BCQS with Quick Review

(Statement with Answers)

1.	Increase airway resistance causes = Inc in residual volume
2.	FRC is sum of = Volume remaind after tidal expiration
3.	Person inspire max and then normly breaths = Inspiratory residual volume
4.	Which volume remains in the lungs after a maximal expiration = Residual volume (RV)
5.	Dead space remains unchanged in = Deep breathing
6.	Left shift of oxygen Hb curve is = Haldane effect
7.	Right shift = Bohrs effect
8.	Which of following Hb type binds with ferric form of iron = Hb M
9.	Major form of co2 carriage in blood is dissolved state in plasma = Carbonated form
10.	Ectopic thyroid hormone secreted by = Squamous cell ca
11.	Caplan syndrme vil occur in = coal workers.
12.	Following drug z used 4 treatment of atypical pneumonia = Erythromycin
13.	The best antihypertensive in a patient with bronchial asthma is = Verapamil
14.	Non-infectious granuloma.is = sarcoidosis
15.	Clara Cells are found in = Terminal Bronchioles
16.	Lung Injury Is Prevented By = Type II Pneumocyts
17.	A neonate has area of atelactasis i the lungs: what is the cause = Dec pneumocytes type 2 b
18.	Lung surfactant is mainly secreted by = Type IIpneumocytes
19.	Neonates are deficient in which cells = Pneumocytes
20.	Which of the following cells regenerate after lung damage = Type 2 pneumocytes
21.	Which of the following is responsible for drug induced pulmonary fibrosis = Bleomycin
22.	FRC means = Residual volume+expiratory reserve volume
23.	Asbestos + smoking causes → Bronchogenic carcinoma

24.	6000 and tital volume 600ml ...at the end it was asked what is value of his anatomical dead space = 150
25.	In a patient having high V/Q Perfusion ratio, there is change in composition of alveolar air = Inc in dead space
26.	Dead space decrease = Tracheostomy
27.	A smoker with ventilation 94%, vent 6000mm breathng at 12 b/min and some other values was asked how much Anatomical dead space = 150ml
28.	Patient having high ventilation perfusion ratio = There is an increase in dead space
29.	Pulmonary vasoconstruction occurs due to = Reduced systemic PO_2
30.	Methemoglobin contains = Alpha ferriprotoporphyrin
31.	Epithelium of post-terminal bronchiole = cuboidal epithelium
32.	Which of the following is most frequently associated with paraneoplastic syndromes = Small cell carcinoma of lung
33.	Cause of massive haemoptysis is = Tuberculosis
34.	Which of the following causes low O_2 saturation with normal O_2 tention = CO poisoning
35.	Which will shift the o2 Hb curve to extreme left = CO poisoning if extreme not mention then click fetal haemoglobin
36.	Major form of co2 transport in blood is = In bicarbonate form (ref Guyton)
37.	Lung compliance will be increased if elastic recoil of lung increased = in copd
38.	Ventillation perfusion mismatch in which ventilation is > perfusion is = Dead space.
39.	Predisposng factor for upper lobe of lungs carcinoma = Silica
40.	Which pneumoconiosis is caused by cotton wool = Bysinosis
41.	Gold standard test for pneumonia = Sputum Culture/sensitivity
42.	Most imp strong exotoxin of strep pneumonia = Streptolysin
43.	Exudative pleural effusion may occure in = bacterial pneumonia
44.	Hospital acquired pneumonia = Staph aureus
45.	Pt with IHD and asthma during surgery which anti hypertensive shuld be used=i/v nitroglycerine
46.	In bronchial Asthma The airway plug contains = Eosionphils
47.	Dead space decrease in = Asthma
48.	pH 7. 32.. PCO_2 34...HCO_3 18 ...PO_2 60 = Metabolic acidosis
49.	During pharyngeal stage of swallowing = Larynx moves up and forward
50.	Muscle of quiet inspiration = Diaphragm
51.	The volume of air remained in lung after maximal expiration is = 1200 ml
52.	Best pulmonary function test for the asthma is = FEV – 1
53.	After maximum expiration when maximally inhaled = Vital capacity (Nov 2014)
54.	Vital Capacity decreases = TLC decrease
55.	Obstructive desease of lungs inc = FRC
56.	Pulonary vasoconstriction occur due to = Dec PO_2
57.	A patient with COPD and PO_2 55, HCO_3 26, PCO_2, 49 and PH 7.3=Type II Respiratory Failure with Compansated Respiratory Acidosis
58.	Patient having acute exacerbation of asthma treatment to be given = IV steroid
59.	Test do before start valproate = Lfts
60.	Young girl with severe ronchi Breathlessness PEFR less than 50 % of predicted management: = Iv steroids plus bronchodilators
61.	Anti cholinergic drug can be used in = Acute bronchospasm
62.	Alveoli are kept dry because of = Negative interstitial pressure
63.	Regarding alveoli = Surfactant avoid collapse of alveoli
64.	Diplamotoylphosphatidyl choline + carbohydrate + proteins are a content of = Surfactant
65.	Patient suffering from lobar pneumonia causative organism = Pneumococci
66.	Lobar pneumonia inveatigation was asked = Sputum culture

67.	Patient with productive cough, clubbing, fever and dyspnea, streptococci and klebsella infections werefound, he has history of recurrent pneumonia and has mucus gland hypertrophy, diagnosis = Bronchiectasis
68.	Strepcoccal pneumonia infection in a person clearnace of infection will occur via = H_2O_2
69.	Man, with history of 40 pack per day smoking developed carcinoma brain which was secondary...primary carcinoma is located in = Lungs
70.	Injury to pulmonary alveoli causing constriction of alveoli byby = Hypoxia
71.	Pulmonary artery supplies = Alveoli
72.	Highest PCO_2 in = Pulmonary artery
73.	CO2 cross through alveoli = High diffusion coefficient
74.	P02 in arterial blood is less than that in alveoli reason = 02 req diffusion pressure to get in artery
75.	Carbon dioxide in tissues is transported to the alveoli mainly im the form of = Bicarbonate
76.	Compliance is inversly proportional to = Recoil force of lung
77.	Left shift Hb dissociation curve = HbF (if asked extreme left Ans: is CO poising)
78.	Patient with asthma, PCO_2 is 55 mmhg, HCO_3 is 35 mmol/l, PH is 7.3, what is the abnormality = Respiratory acidosis with renal compensation
79.	Dead space decreased in = Atelectasis
80.	Microscopic Diagnosis of TB = Casseous necrosis
81.	Common cause of non-obstetrical death in our country = Heart disease
82.	Early changes in asthmatic attack = Dec CO_2 in pulm artery
83.	Right shift O2 dissociation curve = Inc PCO_2
84.	Carbon laiden macrophages = Pneumoconiosis
85.	Antimicrobial activity and preventing infections in lungs = Alveolar macrophages
86.	Farmer rt lower lung calcification = Aspergillosis
87.	Pulmonary vasoconstriction occurs due to = Reduced systemic PO_2
88.	Regarding indication of furosemide = Acute pulmonary edema
89.	Pt having H/o cough cloudy yellow colour effusion fluid containing 98 % neutrophil and2% lymphocyte the fluid was dull to percussion = Purulent exudate
90.	What causes pulmonary vasoconstriction = Inc PCO_2
91.	Which of the following is diagnostic of tuberculous granuloma = Epitheliod cells
92.	FRC means: = Volume of air left at the end of tidal vol
93.	Po2 will be equal to 100mmhg in = Left to rt shunt
94.	Dead space unchanged = Deep breathing
95.	At high altitudes, O_2 is delivered to tissues because of = Right shift of O_2 hemoglobin dissociation curve
96.	Dec arterial PO_2 = Hyoxic hypoxia
97.	55 years old male, Plumber by occupation came with history of Dyspnoe on exertion anddry cough for last two years. His arterial blood gases revealed pH-7.4 P02 62 PCO2 31, HCO3 19. What is the correct discription of his biochemical state = Compensated respiratory alkalosis
98.	Pt with Ph7.4, PO_2 8KPa, HCO_3 4kpa, diagnosis a = Resident at high altitude
99.	Right main bronchus differs from left one because = Its more vertica
100.	Most imp strong exotoxin of strep pneumonia = Streptolys
101.	Most common cause of bronchogenic CA = Tobacco smoke
102.	Which of the following not affect respiratory center = Na (ganong bcq)
103.	Deficiency of pulmonary surfactant = Increases surface tension, reduces compliance
104.	Construction worker… X ray shows pleural plaques… most likely cause = Asbestosis
105.	35-year-old woman complains of chronic cough for 3 months, cough is relieved after she goes on vacation, it restarts upon her return when she starts taking care of her pet birds again. CXR shows pattern diffuse interstitial and nodular shadowing. What is the cause of this pattern = Diffuse interstitial fibrosis
106.	Which lobe of the lungs has only two segments = Right middle
107.	Respiratory centre in brain is sensitive to change in = CO_2

108.	In asthma which is increased = FRC
109.	At normal condition both are equal = Venous return and pulmonary flow
110.	Spontaneous Pneumothorax = Ipsilateral lung collapse and ipsilateral chest spring out
111.	Tension pneumothorax = Contralateral lungs will collapse and contralateral will spring out
112.	Pulmonary embolism caused by = Deep venous thrombosis of leg
113.	Dec PCO2 in blood = Hypoventilation
114.	About veins of thorax = Pulmonary vein lies anterior to pulmonary artery
115.	During inspiration what decreases = Negative pleural pressure
116.	Diabetic female after abdominal surgery, dyspnea and cough = Pulmonary embolism
117.	Gas having maximum diffusion capacity in body fluids = CO_2
118.	Comonest tumor associatd with asbestos exposure = Bronchogenic ca
119.	Which of the poorly respond to chemotherapy = Small cell lung carcinoma
120.	A 55-year-old male presents with symptoms of fever, chills, and colred suputm production, He is a former smoker of 40 pack-year. His chest x ray is abnormal for a 2 cm hilar mass and right lower lobe infiltrate = Bronchial carcinoma
121.	Question: A 55-year-old patient presents with chronic cough. A chest x-ray film demonstrates a circular lesion near the apex of the lung. CT-guided biopsy of the lesion demonstrates a malignant tumor arising in an area of scarred lung. Which of the following type of cancer is MOST likely to be present = Adenocarcinoma
122.	Lung volume that can not be measured = Residual volume
123.	V/q increases = Oxygen increases
124.	V/q increases = Carbon dioxide decreases
125.	Ventilation is high = Base of lungs
126.	Lungs receive blood at rest = 5 liter per minutes
127.	In asthma FEV1/FEV less than 65%condition causes decreases in arterial oxygen saturation without decrease in oxygen tension = CO poisoning
128.	Hyperbaric oxygen given in = Gas gangerene (reg ganong)
129.	Best pulmonary function test for asthma is = FEV1
130.	Normal cycle of respiration = 2 sec inspiration 3 sec expiration
131.	Sarcoidosis = Granuloma with asteroid bodies
132.	Ectopic acth = Small cell carcinoma

HEAD & NECK

PAST PAPER BCQ'S WITH QUICK REVIEW

1.	7th cervical vertebrae has = Longest spine.
2.	Bilateral recurrent laryngeal nerve cut. Muscle spared. =Cricothyroids.
3.	Damage to middle cranial fossa. No lacrimation. Damage to = Pterygopalatine fossa
4.	Muscle of fright and Sadness = Platysma
5.	Suboccipital nerve supply which muscle = rectus capitis posterior
6.	A patient has nodule on vocal cord. The most unlikely mechanism = Atrophy.
7.	About Posterior Triangle of Neck what is true: = Contains subclavian, three trunks of brachial plexus.
8.	Ciliary body = Pigment epi of retina is cont. With pigment epi of ciliary body.
9.	Cingulate gyrus supply = Anterior cerebral Artery.
10.	Closure of lips involve: or unable to close lips which muscle involved = Orbicularis oris.
11.	Deep part of parotid fascia forms = Stylomandibular ligament (the thin deep lamina of parotid capsule ie the investing layer of deep cervical fascia, thickens to form stylomandibular ligament).

12.	Deep to post digastric and near palatoglossus a structure runs obliquely upwards, = Lingual artery.
13.	Elastic cartilage is found at = Epiglottis
14.	Esophagous narrowest at = Cricopharyngus
15.	Gustatory sweating is caused by = Superficial Parotidectomy
16.	Hypoglossal nerve injured. = Tongue deviated to same side.
17.	Inion is a landmark of= external occipital prominence.
18.	Internal carotid bleeding stopped by compressing = C6.
19.	Internal carotid relation to external at beginning = Lateral
20.	Internal laryngeal nerve passes through = Thyroid n hyoid
21.	Intraarticular disc of TMJ involved..Muscle paralyzed. = Lat.pterygoid.
22.	Lower limit of subarachnoid = S2
23.	Maxillary sinus opens into = Middle meatus.
24.	Middle meningeal artery = passes thru foramin spinosum.
25.	Most common congenital anomaly of head and neck = Cleft plate.
26.	Most common dislocation of TMJ = Anterior (TM-Joint can dislocate only anteriorly) sep 2016 question
27.	Most common salivary gland tumor is of which salivary gland =(Parotid
28.	Narrowest point in pediatric airway = cricoid.
29.	Nerve asked, loss of sensation in lower teeth, chin and lower lip = Inferior Alveolar nerve
30.	Regarding middle meningeal artery most appropriate….Enters middle cranial fossa through foramen spinosum…
31.	Retromandibular vein is formed by junction of Maxillary vein and = Superficial temporal vein
32.	Superficial cardiac plexus. = Contain both symp n parasympath
33.	Superior Thyroid artery arise from = External Carotid Artery.
34.	Thyroid gland moves with swallowing because it is enclosed in = Pretracheal fascia
35.	True about Pituitary = Drains to dural sinuses
36.	Anterior triangle=C2,C3
37.	Prevertebral fascia=T4
38.	True about denticulate ligament=adherent to arachinoid and durameter
39.	Nerve lies in cavernous sinus=Abducent
40.	Thyroid is in=Pretrachial fascia
41.	Common site for thyroglossal cyst=infrahyoid
42.	Isthmus of thyroid=2nd and 3rd and 4th tracheal rings
43.	Tracheostomy cahnces of bleeding are from=inf thyroid veins
44.	Most common nerve injured during thyroidectomy=external laryngeal (ref bailey and love)
45.	A girl can't comb her hair nerve damaged is=accessory nerve
46.	Trachea has16-20 incomplete rings
47.	Unable to open mouth muscle damaged=lateral pterygoid
48.	Superficial temporal artery relation=auriculotemporal nerve

THORAX

PAST PAPER BCQ'S WITH QUICK REVIEW

1. Breast outer quadrant = Pectoral (anterior) group.
2. Common site for fracture of rib is angle of rib
3. If circumflex branch of left coronary artery is blocked which area will be affected = Posterior surface of left ventricle.
4. Infection ant. To pretracheal fascia spread to = Ant. Mediastinum.
5. True about Thoracic duct, drains into = At Confluence of left Subclavian and left Jugular.
6. "Maximum distance of 2-point discrimination at" then = BACK OR scapula (ref. Ganong)
7. If asked functional end artry then click heart
8. Visceral pericardium = Vagus nerve
9. Fibrous pericardium = Phrenic (frenic) nerve
10. RT coronary artery = supplies S.A node (Note 60% supplie is through rt coronary)
11. Both sides of 5th posterior intercostal spaces is supplied by – Thoracic aorta.
12. In inferior wall Myocardial Infraction, which artery should be blocked = Right marginal artery.
13. Coronary Arteries – always run n in the respective AV septal depression,
14. Long thoracic nerve supply to = serratus anterior.
15. Which of the following have subcapsular afferent sinuses: lymph nodes
16. Veins of thorax drains into = azygous drains into superior vena cava (azygous vein, after arching over the root of right lung drains into superior vena cava behind the sternal angle, also note that there are no valves in superior vena cava, brachiocephalic veins and azygous system of veins)
17. Right border of heart is formed by = right atrium (IF ASKED in xray the right border is formed by rt atrium plus SVC, AND if this option is not present then click only SVC) See also my post on group.
18. Esophagectomy done stomach is mobilized to upper portion of to do anastomosis with phayrnx, which artery is responsible for stomach supply now =right gastroepiploic artery (if this artery is not mentioned in options then click RIGHT GASTRIC artery)
19. Which of the following arches over root of right lung = azygous vein?
20. What nerve loops around arch of aorta = left reccurrent laryngeal nerve.
21. Breast lobes = separated by interlobar stroma.
22. Medial quadrant of breast drain into = Internal thoracic nodes
23. Phrenic nerve runs on left side with = pericardicophrenic artery
24. Trachea is = has 16-20 incomplete rings.
25. Breast outer quadrant = Pectoral (anterior) group.
26. Common site for fracture of rib is angle of rib
27. Infection ant. To pretracheal fascia spread to = Ant. Mediastinum.
28. Visceral pericardium = Vagus nerve
29. Fibrous pericardium supplied by = Phrenic nerve (aug 2015)
30. Medial quadrant of breast drain into = Internal thoracic nodes
31. A 35 year old man bilateral crepts, on xray chest heart fills completely, mass in rt ventricle, what will be the main cause =myxoma
32. Aneurysm of aorta at diaphragmatic hiatus compresses = azygous vein and thoracic duct.
33. Aortic aneurysm which structure not compressed = Phrenic nerve
34. Apex of the heart = 8 cm from median plane(nov 2014)

35. C1 vertebra feature = lacks vertebral body
36. Cervical rib attached to transverse process will compress = T1(though it can Compresses both C8 and T1)
37. Compression effects on esophagus by which organ enlargement = Left Atrium
38. Dilatation of aortic arch will compress = left bronchus.
39. Esophagus = Passes through left crus of diaphragm….ref RJ last
40. Fibrous pericardium and mediastinal pleura is supplied by = Phrenic Nerve
41. Ganglion found at T7 vertebra = Thoracocervical.
42. Long Thoraccic Nerve Supply = Serratus Anterior.
43. Neurovascular bundle in chest wall lies between = Internal and Innermost layers
44. No valves seen in = SVC
45. Normal resonance are = right 2nd to 4th midclvicular line
46. Pain from lower inferior segment of Diaphrgam = Subcostal Nerves (Phrenic supplies central tendon of diaphrgam)
47. Pulmonary arteries supply. = Alveoli
48. RCA after giving marginal branch obstruction affect = AV node(BRS BCQ)
49. Shoulder pain referred from pleura =C345
50. Situation of SA node = Upper portion of Sulcus terminalis.
51. Soulder pain reffered from pleura = c3, c4, c5.
52. True about Thoracic duct, drains into = At Confluence of left Subclavian and left Jugular.
53. Vessel lying close to LAD , prone to injury during surgery is = great cardiac vein
54. Which stucture passes through esophageal hiatus = Vagus trunk (right vagus).
55. RCA arises from=Ant aortic sinus
56. RCA supply=right atrium and right ventricle
57. RCA does not supply=Right bundle branch
58. LCA thrombosis affects=Ant wall of left ventricle
59. LCA does not supply=AV node
60. Circumflex artery supply=Left atrium + left ventricle
61. Does not drain into coronary sinus=Ant cardiac vein
62. Venous drainage of HEART into=coronary sinus
63. Which drains into coronary sinus=Great cardiac vein
64. SA node located=upper part of crista terminals
65. SA node supplied by=RCA
66. Vessels more prone to injury in cardiac surgery=Great cardiac vein
67. Blood supply of heart regulated by=local metabolites
68. Infraction of posterior 1/3rd interventricular septum artery involved=RCA
69. Infraction of Ant 2/3rd of septum artery involved=LAD
70. Arterial emboli mostly arise from=left atrium
71. Bronchopulmonary segments arrangement on rt side 3,2,5 (5 jan 2015)
72. Left bundle branch is supplied by=RCA+LCA
73. Right bundle branch is supplied by=LCA (note opposite supply)
74. RCA arises from=Ant aortic sinus
75. RCA supply=right atrium and right ventricle

ABDOMEN

PAST PAPER BCQ'S WITH QUICK REVIEW

1.	About Quadrate lobe, true is = Drains by left hepatic duct (quadrate lobe though structurally part of right lobe, but functionally part of left lobe even arterial and venous etc are with left).
2.	Alkaline phosphatase (obstructive jaundice) due to = stone.
3.	Deep ring present in = Fascia transversalis
4.	Left Kidney is not related anteriorly to = Diaphragm
5.	Patient having pain on flexing thigh = pelvic appendix.
6.	Peptic ulcer profusely bleeding from posterior wall of duodenum which artery involed = Gastroduodenal Artery…
7.	Renal vein lies posterior to = Superior mesenteric vein
8.	A pt presented with rt iliac fossa pain. he is diagnosed to have acute appendicitis on flexing his rt thigh inward n medially he cries with pain. What is the type of appendicitis he has = PELVIC
9.	Cholecystectomy is done, where to put the drain = Subhepatic space
10.	Left kidney grossly identified from right kidney by : arrangement of structures in hilum
11.	Esophagectomy done stomach is mobilized to upper portion of ..To anastomosis with phayrnx, Which artery is responsible for stomach supply now =right gastroepiploic artery (if this artery is not mentioned in options then click RIGHT GASTRIC artery)
12.	1st branch of abdominal aorta = inferior phrenic artery.
13.	Which part of liver with poor supply = poor oxygenation of zone 3 (note that zone 1 is richly supplied with and is mainly effected by VIRUSES & INGESTED TOXINS, while zone 3 is poorly perfused and mainly affected by metabolic toxins.
14.	Between umbilicus and suprapubic rectus sheath behind at its lower limit forms – Arcuate line.
15.	Sructure attached to Lumbar Verebra = Anterior Lonudinal ligament.
16.	Which of the following drain into superior mesenteric lymph node = Jejunum (also remember that jejunum is supplied by both GREATER , LESSER Splanchnic nerve while stomach by Greater splanchnic nerve).
17.	Intermittent pain of small intestine is felt = Umblical region.
18.	Peptic ulcer profusely bleeding from posterior wall of duodenum…which artery involved = gastroduodenal artery.
19.	Ascent of the horse shoe shape kidney is prevented by = inf mesenteric artery.
20.	Lady after cholecystectomy , having microcytic anemia = blood loss.
21.	About small intestine true is small intestine = 6-8meters long.
22.	Supply of foregut is primarily derived from : celiac trunk.
23.	An obese man with h/o atherosclerosis underwent laparotomy due to bleeding in during surgery, his small gut was purple n sup mesenteric artry was blocked , so what is dx =wet gangrene
24.	Lymph from the testes drains into = para-aortic lymph nodes (lymph nodes of testes drains into para-aortic lymph nodes , at the level of L2 (while lymph drainage form scrotum is into superficial inguinal lymph nodes .)
25.	Abdominal angina cause by obstruction to = Sup mesenteric.
26.	Strongest layer of bowl is = Sub mucosa.
27.	Middle colic is the branch of = Superior mesenteric artery.
28.	Weight bearing line in pelvis pass through = ischial tuberosity..

29.	Draining to Sup Mesenteric nodes = Jejunum.
30.	Spleencectomy vessels present in which ligament = spleenorenal ligament(splenic artery enters into the hilum of spleen in spleenorenal ligament , splenic vein lies below the splenic artery in the spleenorenal ligament (while six short gastric arteries passes to the fundus of stomach in gastrosplenic ligament).
31.	Neck of bladder and proximal urethra are supplied by =, symphathetic by hypogastric (sympathetic fibers from L1 & L2 segment of the cord via superior and inferior hypogastric plexus).
32.	Regarding Rectus sheeth tendoneous intersections : upper most is located near xyphoid process
33.	Left renal vein relation to aorta = Left renal vein is anterior to it.
34.	Trans:pyloric plane is located at = lower border of L1 (structures lie at the level of trasnpyloric plane = pylorus of stomach , fundus of gall bladder, Hilum of kidney, first part of duodenum , origin of superior mesenteric artery the tips of 9th costal cartilages, and lower end of spinal cord if lower bordr of l1 is not there click upper border of L2).
35.	Pyruvate intermediate between = Glucose and acetyl coA.
36.	Capsule of liver in known as = Glissons.
37.	Simple columnar Epithelium with Goblet Cells and submucosal lumphoid tissue :Ileium (note that submucosal glands of Brunners are present in duodenum while lymphoid payer pateches are present in lamina propria and submucosa of ileum.
38.	An obese man with h/o atherosclerosis underwent laparotomy due to bleeding in n during surgery, his small gut was purple n sup mesenteric artry was blocked , so what is dx =wet gangrene.
39.	Left adrenal gland drains into = Left renal (same is the case for left testicular vein that also drains into left renal vein)
40.	Bare area of liver is limited by= Coronary ligament.
41.	During a surgery a surgeon nicks hepatoduodenal ligament. Which structure is likely to be damaged = Bile duct
42.	Capsule of left kidney prevents the spread of infection to = Other kidney
43.	Regarding lesser sac = double peritonal layer.
44.	While doing appendectomy via incision at Mc'burney's point artery is damaged :deep circumflex Iliac artery (if asked about , which STRUCTURE is damanged then , Ans: should be illeohypogastric nerve).
45.	Narrowest part of urethra = external meautis.
46.	Ca prostate spread by = vertebral plexus .
47.	30 years old smoker, psychotic, vomiting of fluid with visible peristaltic movements on cause -Pyloric stenosis.
48.	True about kidney and relations of different structures passing through it is = Left renal vein is anterior to aorta and left renal artery
49.	True about vertebral column. = Inter vertebral disc forms 1/4 of total.
50.	Lymphatic drainage of skin around anus : medial group of superficial horizontal lymph nodes.
51.	Fracture of 9th and 10th ribs will cause injury of which organ = spleen.
52.	Relation of terminal CBD with head of pancreas is = embedded in head of pancrease.
53.	Which of the following is benign tumour = warthin tumor.
54.	Most common position of appendix = Retrocecal.
55.	Pelvic splanchnic nerve = parasympathetic
56.	Left gastroepiploic artery is branch of = Splenic artery.
57.	Abdominal angina cause by obstruction to = Sup:mesenteric.
58.	Middle colic is the branch of = Superior mesenteric artery.

59.	Direct Inguinal Hernia = Medial to epigastric Artery (ie in kaselaabch triangle) .
60.	Left renal vein = Anterior to aorta and left renal artery
61.	Abdominal angina. Artery involved = SMA.
62.	Abdominal aorta.= Gives renal arteries at L2.
63.	About Quadrate lobe, true is = Drains by left hepatic duct.
64.	After Cholecystectomy surgeon places drains into = . Right Subhepatic Region.
65.	Anterior to pancreas is = Lesser sac (note that; head of pancreas lies anterior to inferior vena cadva and the neck/ body of pancreas lies anterior to aorta, while superior mesenteric artery is anterior to the uncinate process of pancreas.
66.	Antrum of stomach removed what will happen = dec compliance.
67.	Appendicitis pain radiates to umblicus thru = T10.
68.	Barium swallow Feathery appearance in left = Jejunum.
69.	Buccopharyngeal Membrane = Stomodium from Foregut (nov 2014)
70.	Common bile duct parts = omental, retroduodenal, paraduodenal (Bile Duct has 3 parts only)
71.	Common relation of ureter is = Anteriorly gonadal vessels and posterioriorly illiac artery .
72.	Correct about Aorta = Gives renal arteries at L2
73.	Deep inguinal ring is present in = Transversalis fascia.
74.	Dorsal Vein of penis drains into = Greater Saphenous Vein.
75.	Ejaculatory duct opens into = Prostatic urethra
76.	Epidural space is widest at = L2 (Feb 2015)
77.	Esophagectomy done , stomach is mobilized to upper portion of , To anastomosis with pharynx Which artery is responsible for stomach supply = Right gastroepiploic
78.	External spermatic fascia is formed by: = External oblique
79.	Fat tags attached to the walls of large intestine are known as = Appendeces epiplocea
80.	Femoral sheath is formed by = Fasica transersalis and Fasica iliaca
81.	Following doesn't form the layer of inguinal canal = rectus abdominus
82.	Gall bladder is supplied by = Only Cystic Artery
83.	Gastric ulcer pain. = Great splanchnic nerve
84.	Gastroduodenal artery branch of, = right hepatic artery (actually its branch of common hepatic artery, but if it's not in option the click right hepatic artery Ref RJ LAST).
85.	In open laparotomy, surgeon recognizes left kidney by = anterior relation with stomach, pancrease, descending colon, spleen, jejunum
86.	Inguinal canal. = Roof formed by conjoined tendon.
87.	L1-L2 ends at = Inferior hypogastric plexus.
88.	Lesser omentum = Connects with deudenum..
89.	Liver weight = 1.5 kg
90.	Left suprarenal drain = Left renal vein
91.	lumber triangle anteriorly bound by posterior border of = Serratus anterior
92.	Man is suffering from testicular ca,the lympahtic drainage of testis is into = Para aortic lymph nodes
93.	Stucture most likely to be damaged even on minor trauma = spleen.
94.	Neck of fibula fracture dorsiflexion n eversion gone. =Common peroneal nerve.
95.	Pancreatitis(acute) will cause fluid accumulation in = Lesser sac

96.	Patient is pregnant and suddenly faints. She'll be positioned in left lateral and not right lateral to avoid compression to which abdominal structure = IVC
97.	Patient feels pain after she underwent surgery for fibroids, structure injured would be = Ureters..
98.	Posterior relation of left kidney is = diaphragm.
99.	Rite Testicular vein enter = Ivc.
100.	Scrotum drains to = Superficial Inguinal Nodes
101.	Spread of renal tumor will be through = Renal Vein.
102.	Suply of midgut form sympathetic = t5 – t12 (sympathetic innervation, preganglionicfrom thoracic splachnic nerves t5 to t12 while postganglionic cell bodies; superior mesenteric ganglion ref;kaplan anatomy).
103.	Supply of sphincter urethra comes from = Pudendal nerves..
104.	Surgery for removal of ovary done which is damaged =Internal Iliac Artery.
105.	Terminal part of CBD in relation to pancreas is = Embedded into pancreas
106.	The base of urinary bladder is made by = Post surface
107.	Trauma to left 10 rib causes damage to = Spleen
108.	True about ivc = comenses at L5.
109.	Ulcer 2nd part of duodenum which artery will u ligate = Gastroduodenal artery.
110.	Ureter is not constricted at = Psoas muscle
111.	Venous drainage of urinary bladder is into = Internal Iliac Vein.
112.	What is the relation of terminal CBD with head of pancreas= Embedded in it.
113.	A patient was brought to the hospital after a roadside accident. On examination he was pale with low pressure and fracture of left 10th rib. Which organ is most likely to be injured = Spleen
114.	Alkaline phosphatase(obstructive jaundice)due to = stone.
115.	Deep ring present in = Fascia trAns:versalis
116.	Left Kidney anteriorly is not related to = Diaphragm
117.	Patient having pain on flexing thigh = pelvic appendix.
118.	Renal vein lies posterior to = Superior mesenteric vein
119.	1st branch of abdominal aorta = inferior phrenic artery.
120.	Abdominal angina. Artery involved = SMA.
121.	Abdominal aorta.= Gives renal arteries at L2.
122.	About Quadrate lobe, true is = Drains by left hepatic duct.
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124.	Anterior to pancreas is = Lesser sac (note that; head of pancreas lies anterior to inferior vena cava and the neck/ body of pancreas lies anterior to aorta, while superior mesenteric artery is anterior to the uncinate process of pancreas.
125.	Antrum of stomach removed what will happen = dec compliance.
126.	Appendicitis pain radiates to umblicus thru = T10.
127.	Buccopharyngeal Membrane = Stomodium from Foregut (note that ; if asked Buccopharyngeal fascia then pharynx from foregut.
128.	Common bile duct parts = omental, retroduodenal, paraduodenal (Bile Duct has 3 parts only)
129.	Common relation of ureter is = Ant.to gonadal vessels and post.to iliac Artery..
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137.	Gall bladder is supplied by = Only Cystic Artery
138.	Gastroduodenal artery branch of, = right hepatic artery (actually its branch of common hepatic artery, but if it's not in option the click right hepatic artery Ref RJ LAST).
139.	In open laparotomy, surgeon recognizes left kidney by = anterior relation with stomach, pancrease, descending colon, spleen, jejunum
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141.	L1-L2 ends at = Inferior hypogastric plexus.
142.	Lesser omentum = .connects with deudenum..
143.	Lt suprarenal drain = Lt renal vein
144.	Lumber triangle anteriorly bound by posterior border of = Serratus anterior
145.	Man is suffering from testicular ca,the lympahtic drainage of testis is into = Para aorticLymph nodes
146.	Pancreatitis(acute) will cause fluid accumulation in = Lesser sac
147.	Rt. Testicular vein enter = Ivc.
148.	Scrotum drains to = Superficial Inguinal Nodes
149.	Spread of renal tumor will be through = Renal Vein.
150.	Supply of midgut form sympathetic = t5 – t12 (sympathetic innervation , preganglionic from thoracic splachnic nerves t5 to t12 while postganglionic cell bodies ; superior mesenteric ganglion ref;kaplan anatomy)
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153.	Terminal part of CBD in relation to pancreas is = Embedded into pancreas
154.	The base of urinary bladder is made by = Post surface
155.	Trauma to left 10 rib causes damage to = Spleen
156.	True about ivc = comenses at L5.
157.	Ulcer 2nd part of duodenum which artery will u ligate = Gastroduodenal artery.
158.	Ureter is not constricted at = Psoas muscle
159.	Venous drainage of urinary bladder is into = Internal Iliac Vein.
160.	What is the relation of terminal CBD with head of pancreas= Embedded in it.

PELVIS & PERINEUM
PAST PAPER BCQ'S WITH QUICK REVIEW

1.	Boy with h/o trauma to perineal region, swelling in scrotum and ant. Abd wall but didnt go to thigh. Rupture of =Bulbar urethra.
2.	Sacral hiatus is formed due to = Failure of fusion of laminae of 4th and 5th sacral vertebrae (Sacral Hiatus is used to administer Caudal (Epidural) anesthesias.
3.	membranous urethra rupture =Deep pouch (MUD)
4.	Post division nerves = femoral L3-L4, common peroneal nerve L-S2, superior and inferior gluteal nerves.
5.	Around cloaca rupture of this mesoderm cranially will produce=.Ectopic anal opening.
6.	Aspiration of hydrocele, needle does not pierce = tunica albugenia.
7.	Cervical ca. Lymph nodes involved = Internal iliac (if the option <> both internal and external iliac is present, prefer that).
8.	Coccygeal ligament start at = L1
9.	Detrusor nerve supply = Parasympathetic pelvic nerves (while pudendal nerve supplies external sphincter)
10.	In cervical carcinoma,what is the lymph drainage = both internal & external iliac
11.	In feamle neck of bladder lie = Lie above urogenital diaphragm.
12.	Intertesticular temp less than rectal temp = 2-3c
13.	Labia majora vesicles lymph node = medial superficial inguinal node.
14.	Mediolateral episiotomy. Structure cut = Bulbospongiosus muscle.
15.	Middle rectal artery branch of, = internal iliac
16.	Most of the perinium and pelvis nerve supplied by, = Pudendal
17.	Nerve loss in urogenital triangle which nerve involved = Pudendal Nerve
18.	Pain of ovarian tumor is refered to thigh by = Obturator nerve.
19.	Penile urethra rupture = scrotum under colles fascia
20.	Perineal area innervation was asked = S2-4.
21.	Regarding rectum. = Also supplied by median sacral artery.(arises from posterior aspect of abdominal aorta just before bifurcation , descending in the front of sacrum and supply the posterior portion of rectum .Ref; BRS ANATOMY).
22.	Sacral plexus anterior devison branch is obturator nerve.
23.	True relatd bladdr separatd frm rectum by = donovillier fascia.
24.	Urethra is narrowest at = External meatus
25.	What is the landmark for pudendal nerve block = ischial spine.
26.	During c section structure damage causing cramps in lumbar region = ureter.
27.	H/o fall followed by bladder incontinence unable to void urine. Spinal segment involved. =. S2S3S4.
28.	Sperm stored aftr ejaculation in … EPIDIDyMUS
29.	Most common cause of urine obstruction in boys is=posterior urethral valve obstruction.
30.	Main support of uterus is by=transverse cervical ligament.
31.	If ovaries are removed from ovarian fossa what is most likely to be damaged=internal iliac artery.
32.	Carcinoma prostate drains into =internal iliac lymph nodes
33.	Length of ureter is= 25 to 30 cm
34.	Fallopian tube length is =10 cm
35.	Weight bearing line passes through=ischial tuberosity
36.	Highest numbers of alpha receptors are present in=neck of bladder
37.	Weight of prostate=20gm(feb 2014)

38. Unable to void urine lesion=S2,S3,S4

UPPER LIMBS

Past Paper Bcq's with Quick Review

1.	X.ray of elbow of 12 yr girl, which secondary ossification center will appear last on x.ray = Lateral Epicondyle
2.	Carpal Tunnel Syndrome = Wasting of thenar muscles.
3.	1st lumbrical = attaches to radial side of index finger (Details; The first lumbrical of the hand arises from the anteriolateral surface(ie radial side) of the tendon of flexor digotrum profundus to the index finger
4.	A Child got blow at elbow and elbow joint displaced and loss of sensation over little finger structure involved = Ulnar nerve
5.	Axillary vein is formed by = basilic vein and vena commitantes of brachial artery (these form axillary vein at the lower border of teres major muscle.
6.	Age for ossification centre Capitellum > radial head > medial epicondyle > trochlea > olecranon > lateral epicondyle → 1 , 3 , 5 , 7 , 9 , 11 (ODD Numbers so 11 is lateral epicondyle
7.	Damage to scaphoid bone causes injury to = Radial Artery
8.	Fracture hamate bone = Ulnar nerve (A fall on the outstretched hand may fracture the hook of hamate which may damage the ulnar nerve as it passes into the hand).
9.	Lateral thenar muscles spared but other short muscles of hand paralysed,Injury = Ulnar
10.	Nerve injured in Ant dislocation of Shoulder joint is = Axillary
11.	Nerve supply to extensors of arm is supplied by = Post cord (Radial nerve is from posterior cord
12.	Patient lacerated the dorsal part of his wrist accidentally. He came in with difficulty to adduct the fingers and difficulty abducting the thumb. Which nerve was paralysed = Ulnar Nerve.
13.	Regarding cephalic vein = Lie between deltoid and pectoralis major muscle
14.	There is a trauma to upper limb and pt can't feel sensation in little finger and paralysis of dorsal interossei which nerve is damaged = Ulner Nerve.
15.	Wasting of thenar eminence,loss of sensation over thumb and index finger,nerve involved is = Median Regarding wasting of the thenar eminence always click median nerve
16.	Whiplash injury, c5 c6 injury = flexion of elbow (flexion of fore-arm)
17.	Sharp knife injury to upper arm and he is unable to flex his elbow and loss of cutaneous sensation on lateral aspect of forearm nerve injured = Musculocutaneous nerve
18.	Extensors of arm supplied by=posterior cord of brachial plexus
19.	Anterior dislocation of shoulder nerve injured=axillary
20.	Damage to scaphoid=radial artery
21.	Wasting of thenar surface and loss of sensation over thumb and index finger=median nerve
22.	Head of humerus supplied by=ant circumflex artery
23.	Suprascapular artrey arises from=thyrocervical trunk
24.	After breast surgery patient unable to lift her arm=damage to serratus anterior muscle
25.	Unable to adduct and abduct fingers and loss of adduction of thumb nerve injured= ulnar nerve cpsp key
26.	Lymphatics from medial quadrant of breast drains=internal mammary nodes
27.	Patient after RTA Presents in emergency with multiple bone fractures b.p 80/50 first step=maintain airway
28.	Loss of abduction of shoulder upto 15° muscle injured=supraspinatus
29.	Loss of abduction of shoulder 15-90°=deltoid
30.	Loss of abduction of shoulder above 90°=seratus anterior and trapezius

31.	Loss of extension of medial 4 fingers at Metacarpopharengeal with intact sensation=injury to radial nerve at wrist joint.
32.	Not supplied by median nerve=adductor pollicis
33.	Muscle with dual nerve supply from median and ulner nerve=flexor digitorium profundus
34.	Infection of first pulp space drained by = infraclavicular nodes
35.	Fracture of surgical neck of humerus=axillary nerve
36.	Clavipectoral fascia invests=pectoral minor muscle
37.	Basilic vein drains into=axillary vein
38.	Lateral 2 lumbricals supplied by=median nerve
39.	Nerve supply to latismus dorsi=thoracodorsal nerve
40.	Cephalic vein presents in=deltopectoral groove
41.	Cephalic vein=lateral to biceps
42.	Common site for CA breast=upper outer quadrant upto 60%
43.	Structure not passing through flexor retinaculum of forearm=ulnar nerve
44.	Compensation of supinator by=biceps brachi
45.	Strong supinator at elbow=biceps brachi
46.	If abduction of arm lost=damage of upper trunk+post cord
47.	Cords of brachial plexus named according to relation with=axillary artery
48.	Tingling sensation ob right thumb during c section under epidural anasthesia injury due to=C6
49.	Below medial condyl of humerus passes=ulnar nerve
50.	Ant dislocation of shoulder nerve involved = axillary nerve
51.	Weight of upper limb trAns:mitted tto axial skeleton by=coracoclavicular ligament
52.	Part of Carpal tunnel=flexor carpi radialis
53.	Finger drop with no wrist drop=posterior interosseous nerve
54.	Sensory loss on dorsal side of finger=radial nerve injury at wrist
55.	Not a hybrid muscle=flexor carpi ulnaris
56.	Nerve supply to dorsal intetossei=ulnar
57.	Clawing of 4th and 5th digit=lumbrical
58.	Not a Contents of axilla =brachial artery
59.	Common direction of shoulder joint dislocation=inferior
60.	Most disabling Injury to hand=median nerve
61.	All motor nerves of hand can be tested by movement of=thumb
62.	Unable to count on his finger tips nerve involved=median
63.	In large joints, shoulder joint is weakest among all.
64.	Medial rotator and adductor of shoulder joint=teres major
65.	Biceps brachi=C5,C6
66.	Unable to abduct his shoulder actively but after initial abduction of 40° able to abduct to full range=supraspinatous damage
67.	Most appropriate about clavipectoral fascia=covers pectoris minor 1st jan 2015 surgery
68.	If lat cord of brachial plexus damage which muscle get paralysed most=pectoralis major 1st jan 2015 surgery
69.	Regarding elbow joint=hinge joint 1st jan 2015
70.	Small muscle of hand supplied by=T1
71.	Lymph drainage from outer nipple to which group of lymph nodes=anterior axillary 1st jan 2015 surgery
72.	Dorsal scapilar nerve supplies=levator scapulae 6th feb 2015
73.	Nerve supply to rhomboids=dorsal scapul4ar nerve 6th feb online 2015
74.	Medial side of arm suppied by=medial cord 4th-6th feb conventional 2015

75.	X.ray of elbow of 12 yr girl which secondary ossification centre will appear last on xray=lateral epicondy 6th feb 2015
76.	Suprascapularis,supraspinatus,infraspinatus,teres minor=rotator cuff
77.	Shoulder joint%ball and socket
78.	1st carpometacatpal=saddle joint
79.	Radioulnar joint=pivot
80.	Wrist joint=ellipsoid.
81.	Metacarpophylangeal joint=condyloid
82.	Interphalangeal joint=hinge
83.	Carrying angle%170°in males in females=167°
84.	Spination is more powerful than=pronation
85.	Articular disc=fibrocartilage
86.	Rotation is not possible at=wrist joint
87.	Seratus anterior=long thoracic nerve
88.	Muscle supplied by all 5 divisions=pectoralis major
89.	Extensor indicis=deep branch of radial nerve
90.	Commonly fractured carpal=scaphoid
91.	Commonly dislocated=lunate
92.	Latgest carpal=capitates
93.	Smallest carpal=pisiform
94.	1,2lumbricals=median nerve
95.	3,4lumbricals and all interosseous=deep branch of ulnar nerve
96.	Lumbricals=extend IP joint and flex MCP joint
97.	Interosseous=extend IP joint and flex MCP joint +abductors
98.	Thenar space=median nerve except aductor pollicius
99.	Hypothenar,aductor pollicius=deep branch of ulnar nerve
100.	Largest branch of axillary artry=suprascapular artry
101.	Vein used in central venous catheteterization=basalic vein
102.	Largest branch of brachial plexus=radial nerve
103.	Pronation=mainly median nerve
104.	Supination=ulnar+musculocutaneous nerve
105.	Klumpke palsy=ulnar nerve
106.	Erbs palsy=medially rotated and forearm pronated
107.	Commonly fractured bone=clavicle

LOWER LIMB

PAST PAPER BCQ'S WITH QUICK REVIEW

1.	Extension of Hip and Flexion of Leg is by = Semitendinous
2.	In some children Dorsalis pedis Artery is missing congenitally. Then dorsum of foot will be supplied by which artery = Peroneal artery
3.	The muscle involved in unlocking of knee joint is = Popliteus
4.	Adductor brevis supplied by = ant branch of obturator nerve.
5.	In adult head of femur supply = Med n lat circumflex femoral art.
6.	Medial boundary of ischiorectal fossa. = External anal sphincter (External anal sphincter and sloping fibers of levator ani forms medial border).
7.	Tibial nerve severed which muscle will still flex the knee joint =Short head of biceps.
8.	Adductor muscle hamstring muscle supplied by which nerve = Tibial part of sciatic nerve
9.	Diseased ovary pain radiating to medial thigh of body due to nearby presence of = Obturator Nerve
10.	Eversion is done by = Peroneus longus
11.	Excessive eversion ligament ruptured. = Deltoid.
12.	Femoral and obturator nerve drived from which section of spinal cord = L2 L3 L4
13.	Femoral arterial pulse = Mid inguinal point.
14.	Gluteus medius and minimus. = Abduct and medially rotate.
15.	Gracillis is supplied by the nerve = obturator nerve.
16.	If anterior dislocation of tibia on femur is mentioned then anterior cruciate ligament.
17.	Ligament that prevents anterior dislocation of femur on tibia = Posterior cruciate
18.	Lymph drainage of perianal skin is from one of the following = medial group of horizontal superficail nodes (Nov 2104)
19.	Most commonly fructure of bone after 60 yrs = Neck of femur
20.	Neck of femur supplied by = Medial and lateral circumflex arteries.
21.	Person standing. Venous return from legs mainly facilitated through = Contraction of skeletal muscles.
22.	S1 nerve root lesion = Loss of Ankle jerk..
23.	Saphenous nerve is terminal branch of = femoral
24.	True regarding the Flexor Hallucis longus= tendion can be felt immediately post to medial malleolus
25.	Unable to stand from sitting position=inf gluteal nerve and gluteus maximus muscle
26.	Muscle involved in unlocking of knee joint=popliteus
27.	Head of femur=has an angle of 125° with shaft
28.	Sciatic nerve pass through=greater sciatic foramen
29.	Femoral canal is formed by=fascia trAns:versalis and fascia iliaca
30.	Knee joint=L3,L4
31.	After RTA unable to flex both her leg and thigh = Sartorius
32.	Flexor at hip extensor at knee=plantaris
33.	Injury to neck of fibula artery damaged=ant tibial artery
34.	Great sephanous vein has =20 valves
35.	Site for venesection=great sephanous vein
36.	Wall of inguinal canal not formed by=lacunar ligament

37.	Damage to sciatic nerve than nerve to dorsum of foot=sephanous nerve
38.	Great sephanous vein drains 3.5 cm inf and lateral to=pubic tubercle intracapsular tendon=popliteus
39.	After RTA patient unable to dorsiflex and evert foot=common peroneal nerve
40.	Strongest ligamnnt=iliofemoral.
41.	Doesnot pass through greater sciatic foramen=inf gluteal vessels
42.	Dorsalis pedis artery pass through=1st aand 2nd metataesal space
43.	Patient presents with right foot in the air and right pelvis sink down=left sup glureal nerve.
44.	Complete common peroneal lesion is complete loss of=dorsiflexion of foot
45.	If dorsalis pedis artery absent alternative is=peroneal artery
46.	Young athelete has difficulity in flexion of knee and extension of hip muscle paralyzed=semitendinosus
47.	Tibialis ant and tibialis post both cause=inversion
48.	Plantar surface of foot supplied by=post tibial nerve
49.	Which muscle abduct femur at hip joint=gluteus medius
50.	Gluteus medius supplied by=sup gluteal artery
51.	Patellar tendon bearing POP cast is to be applied in=tibial fracture
52.	Femoral ring is not bounded by=femoral artery
53.	Not a hamstring=short head of biceps
54.	Most medial in femoral triangle=lymphatics
55.	Injury to med meniscus with unstable knee other structure injured=ant cruciate ligament
56.	Girl with high heels fall and her ankle ligament stretched=lateral ligament
57.	Not pass through greater sciatic foramen=tendon of obturator internus
58.	Not a part of anastomosis around femur=superficial circumflex artery
59.	Not a part of adductor canal=femoral nerve
60.	Femoral hernia lies=below and lateral to pubic tubdrcle
61.	Not related to popliteal fossa=sephanous nerve
62.	Dorsalis pedis is continuation of=ant tibial artery
63.	Oblique ligament is extension of=semimembranosus
64.	Bone without muscular attatchment=talus
65.	Foot drop=common peroneal nerve
66.	Injury to tibial part of sciatic nerve some flexion still possible due to=short head of biceps femoris
67.	Loss of inversion but able to evert muscle damaged=tibialis ant and tibialis post
68.	Patient cant evert foot due to damage of=peroneus longus
69.	Pass posterior to medial malleolus=tibialis posterior
70.	Muscle in inferior relation of hip joint=obturator externus
71.	Ligament that prevents anterior dislocation of femur on tibia=posterior cruciate 6th feb 2015 mixed
72.	Eversion is done by=peroneus longus 6th feb 2015
73.	Neck of femur supplied by=medial and lateral curcumflex artery 6th feb 2015
74.	Nerve spared in epidural anasthesia=S1 ,S2 6th feb 2015
75.	Structure attatched to lumbar vertebrae=anterior longitudinal ligament 6th feb 2015
76.	Lateral foot dermatome=S1 1st jan 2015 surgery
77.	A sprinter during running had injury to his ankle he can stand on his toes but with severe pain along with visible echymoses around ankle joint=plantaris tendon 1st jan 2015

78.	Direct inguinal hernia=medial to epigastric artery 1st jan 2015
79.	Blood supply of head of femur in children=obturator artery
80.	Largest bone of foot=calcaneum
81.	Largest sesamoid bone=patella
82.	Maintenance of trAns:verse arch of foot by=cuneiform bones
83.	Pubofemoral ligament=triangular
84.	Ischiofemoral ligament=spiral
85.	Iliofemoral=strongest ligament of body
86.	Joint between femur and patellae=gliding variety
87.	Lateral colateral separated from lateral meniscus by tendon of=popliteus muscle
88.	All muscles of medial compartment of thigh supplied by obturator nerve except hamstring part of=adductor magnus
89.	Gracilis supplied by=obturator nerve
90.	Extension of thigh at hip joint by=hamstring part of adductor magnus
91.	Dorsiflexion and inversion=tibialis ant and peroneus tertius
92.	Plantar flexion and eversion by=peroneus longus and peroneus brevis
93.	Plantar flexion and inversion by=tibialis posterior
94.	Ext digitorium brevis supplied by=deep peroneal nerve
95.	All lumbricals and intetossei supplied by lateral plantar nerve except=1st lumbrical
96.	All muscles of ant compartment of thigh supplied by femoral nerve except=psoas muscle
97.	Iliiofemoral inverted Y in shape
98.	Pubofemoral triangular in shape
99.	Ischiofemoral spiral in shape.
100.	Muscle extend the leg at the knee joint and flexes the thigh at hip joint=Rectus femorus (golden 4 bcq)

General Pathology
Past paper bcqs with quick review

1.	A scenario of amyloidosis. On autopsy of the patient heart was weighed 540gms. This change is due to = Hypertrophy
2.	Breast atrophy in young female is due to = Estrogen and Progesterone
3.	A patient has nodule on vocal cord. The most likely mechanism = Hyperplasia
4.	Women who has Leiomyoma and epithelium covering endometrium shows abundant stroma with a smaller number of endometrial glands, whats happening in Endometrium = Dysplasia
5.	Case in which 2-year histroy with HPV infection in female cervix + nucleus prominent and enlarged = Dysplasia
6.	Premalignant lesion = Dysplasia
7.	Regarding dysplasia = Irregularly shaped cells
8.	Female presented with some epithelial changes, HPV postive and pap smear shows large cells with large nucleus diagnosis = Dysplasia
9.	Metaplasia = Functional change of Epithelium (many times this bcq has come)
10.	Cervical metaplasia most likely cause = High multiparity
11.	Epitheial changes in endocervix in squamous tissue due to = Metaplasia
12.	Poly arteritis nodosa = Fibrinoid necrosis
13.	Most appropriate TB Histological picture = Caseous necrosis
14.	Pt came in with abdominal pain, his amylase was high, he was diagnosed with Pancreatitis. What is his omentum going to show = Fatty necrosis
15.	Death of Gas gangrene is = Toxemia.
16.	The specific feature of Apoptosis = Cell shrinking
17.	Host defence against neoplasm = Apoptosis
18.	Apoptosis = Prevent over population
19.	Regarding apoptosis, correct is = Prevent overcrowding of cells
20.	Apoptosis initiates when = Activation of caspases
21.	Councelman bodies in = Apoptosis
22.	Natural defence against neoplasm = Apoptosis
23.	In Acute Inflammation Fluidpresent is = Protein more than 3gm
24.	1st reapnonse against acute inflammation in tissue = Macrophages (ref guyton page 435 11th edtion)
25.	Most potent chemotactic factor = C5a
26.	Initial stage of apoptosis = Activation of caspases
27.	Irreversible Injury = Massive Ca Influx (while sodium efflux is reversible)
28.	A patient having vegetations on heart valves due to Staph. Aureus died. On autopsy a tan- white wedge-shaped lesion of 1.5 x p 3cm is seen with its base on capsule. Lesion on the spleen can be explained as = Coagulative necrosis
29.	Liquefactive necrosis occurs in = Brain
30.	Dysplasia = Reversible (sometimes its reversible too)
31.	Coin lesion on chest x ray of a woman, how to differ btwn granuloma & neoplasia = Rapid inrease in size
32.	8-month Baby boy with repeated rhinitis 2episodes of pneumonia in less then 2 mnth.low plasma B cells n decreased immunoglobulins = IgA deficiency
33.	which one is specific for diagnosis of SLE = Anti double stranded DNA
34.	Low complement seen in = SLE.
35.	Xeroatemia, keratitis, painful joints = Sjogren syndrome.
36.	Sjogren related with = R.A
37.	Local cause of delayed wound healing = Infection
38.	Collagen that gives strenght during wound healing = Type 1
39.	Scenario of surgically mass renal which will indicate malignant nature = Invasion

40.	Which of the following is benign tumour = Warthin tumor
41.	Which of the following is benign = Adenoma
42.	Which of the following environmental factors cause mutation of proto oncogenes = Radiation
43.	Free radicals formed by radiation they will damage = DNA
44.	Protoncogen converted into oncogen causing Cancer due to = Point Mutation
45.	Radiotherapy causes cancer after = 5-10 years
46.	Cancer cells predominantly have Increased concentration of = Keratin
47.	Regarding malignant melanoma cell in chronoligical order which wil present earlier = NK cells.
48.	Most common cause of permanent atrophy is = Denervation.
49.	Which is a small blue cell tumour = Neuroblastoma
50.	Circulating tumour cell most widely diagnosed by = Peripheral blood film
51.	Natural defence against tumour = Apoptosis
52.	Most common tumour of child in epiphysis is = Osteochndroma
53.	Seminoma is a tumour in male, its equivalent when occurs in ovary then it called = Dysgerminoma
54.	Tumor suppressor gene = P53
55.	Loss of p53 = Cell survival
56.	Pateint has swelling in right thigh, which is increasing in size, x-ray show no connection wth bone, best marker = Vementin
57.	Thyroid CA operated 3cm mass which has congo stain. Marker used = Calcitonin
58.	Mediators of pain in acute inflamation = Bradykinin and PGs
59.	Parathyroid hyperplasia involves = Chief cells
60.	Lady feeding her baby for a year no problem.... what happened during pregnancy = Stromal hypertrophy
61.	Chronic irritation → Metaplasia (imp Bcq)
62.	Example of hyperplasia +hypertrophy = Uterus in pregnancy
63.	Dysplasia is recognised by = Loss of polarity
64.	Chemotherapy given and tumor size become small this mechanism is by = Apoptosis
65.	A 28-year-old male withhistory of jaundice and raised ALT. The liver histology shows councilman bodies. These are most likely to beprocess of = Apoptosis
66.	Imp cells of chronic inflammation = Macrophages (ref goljan patho)
67.	Common ite of metastaic calcification → Kidneys
68.	Fibrinoid necrosis occur in all except = Essential hypertension
69.	Following are examples of apoptosis except = Atherosclerosis
70.	All of the following are feature of apoptosis except = Cellular swelling
71.	Rare site for tumour metastasis = Spleen
72.	Cause of death in gas gangrene = Toxemia
73.	Dystrophic calcification is present in which of the following = Tuberculosis
74.	At what rectal temperature permanent cell injury occurs if that temp remains constant = 106
75.	The most common cause of cell injury in our country = Ischemia
76.	Which finding on electron microscopy indicates irreversible cell injury = Flocculent densities in mitochondria.
77.	A boy wid ornithine transcarboxylase deficiency, liver failure had liver transplant after one year both donor nd recepient presented wid enlarged liver — cause = Hyperplasia
78.	Which of the following factor doesn't affect wound healing = Vit. D deficiency
79.	The most common complication of wound healing = Infection
80.	IL-1 produces = T-lymphocyte activation
81.	IN black wound healing was asked, healing will = KELOID
82.	A preformed mediator of inflammation is = Histamine
83.	Last mediator of endotoxic shock = IL6
84.	What is the mediator of allergy = 5 hydroxy tryptamines
85.	Difference between adenoma and hyperplasia is = Capsule.

86.	Circulating phagocyte is = Neutrophil
87.	Pus contain = Dead neutrophil
88.	A patient with hoarsness of voice and laryngeal nodule, which is unlikely = Atrophy (imp BCQ)
89.	Which of d following is not neoplasia = Choristoma
90.	All cells contain telomerase except = Somatic
91.	Preganat lady died in an accident after 48 hours cause = Fat embolism.
92.	(Note that if fracture and 3 days duration are not mentioned then better option will be amniotic fluid embolism ie it causes immediate deaths symptoms of fat embolism appears after 48 hours)
93.	All true regarding Breast Peau de orange appearance Except = Orange Brown Appearance is because of the Necrosis
94.	Carbon laden macrophages = Pneumoconiosis.
95.	HLA B27 associated disease = Reiter's Syndrome (if ankylosing spond present in options prefer that.
96.	Interstitial lung disease with non-caseating granuloma & hilar nodes = Sarcoidosis
97.	T cell receptor complex bind with. = MHC.
98.	Curling ulcers are coz of=burns
99.	50 yrs old. Hypertensive severe chest pain radiating to back died, autopsy findings. = Medial necrosis of aorta.
100.	6 years old patient presents with rhinitis, edema and urticaria on external surfaces = Type I hypersensitivity...
101.	Most common cause of cell injury in our country is = Ischemia.
102.	A 60 years old man develops pain in calf muscles after walking hundred (100) yards pain is due to = Popliteal vein (DVT)
103.	A newly married female came with pain in rt illiac fossa her TlC 12000 she has fever n vomiting her lmp was 3 weeks back what is diagnosis = Acute Appendicitis.
104.	A tumor with all germ layers = Teratoma.
105.	About metaplasia = One epithelial change into anothr normal epithelium.
106.	Betel nut chewing = Submucosal fibrosis.
107.	Breast atrophy in young female is due to = Estrogen and Progesterone.
108.	Cannot regenerate = Lens.
109.	Child having meckels diverticulum is having bleeding per rectum, it is due to = Ectopic gastric tissue.
110.	Child with sore throat after 3 weeks developed oedema, haemturia, cause would be = Post streptococcal GN.
111.	Councilman bodies seen = Apoptosis.
112.	Definitive diagnosis of TB = Sputum AFB.
113.	Diagnostic tumor marker for ovarian CA = CA 125 .
114.	Diphtheria vaccine reaction = Type 3 (remember any serum will cause serum sickness ie type 3 hypersensitivity.
115.	Edema of acute infection. Feature = Proteins >3gm: Exudate
116.	Imp factor affecting collagen synthesis during healing is = Vit C.
117.	Feature not associated with irreversible cell injury is = Myelin figures (Robins says they are part of both reversible and irreversible)
118.	Fisherman is presented with gingival bleeding and ecchymosis, he is suffering from = Vit. C deficiency.
119.	ICAM and VCAM = Adhesion molecules
120.	ICAM and VCAM are for = Leucocyte adhesion (sep 2016)
121.	Least chances of renal stones are associated with = Hyperlipidemia...
122.	Liquefactive necrosis = In brain.
123.	Main difference between primary and secondary intention wound healing is = Wound Contraction (imp BCQ)
124.	Mesothelioma is associated with = Asbestos (and smoking is associated wid bronchogenic)
125.	Type of necrosis in omentum → Fat necrosis.

126. Most common cause of premalignant change in mouth in adult = Lichen Planus
127. Most imp response in shock as a whole = CNS ischemic response
128. Not a part of natural immunity = Plasminogen.
129. Open wound healing includes = Contraction of myofibroblast.
130. Organ having least chances of infarction = Liver.
131. Tubercolosis can show both caseous and coagulative necrosis depends upon the scenario.
132. In chronic hemolysis pigment stored in tissues are → Hemosiderin.
133. Presence of pancratic tissue in gastric mucosa is termed as = Choristoma (The other site for choristoma is brain tissue in nasal cavity)
134. Pt came in with abdominal pain, his amylase was high, he was diagnosed with Pancreatitis. What is his omentum going to show = Fatty necrosis.
135. Pt came with testicular mass. It was diagnosed as a yolk sac tumor. What is the follow up marker for this patient = Alpha-Fetoprotein.
136. Pt. with cervical lymphadenopaty, +ve AFB sputum, sign to look for TB on microscopy is = Caseous necrosis.
137. Sarcoma is differentiated from carcinoma = Tissue of origin (if this option is not present, prefer aggressiveness).
138. Irreversible injury starts with → Release of lysosomal enzymes.
139. 1st response to any injury is vasonstriction.
140. Metaplasia → Reversible.
141. Silicon breast implant now presented with inflammation = Neutrophills
142. Thromboxane A2 is produced by = Platelets
143. Not a liver granuloma = Silicosis
144. True about fat embolism = Occurs after 48 hours
145. Common cause of pulmonary embolism = DVT
146. Most common origin of DVT = Popliteal vein
147. Most common for pulmonary embolism = Femoral veins
148. Local cause of edema = Allergy
149. Shock without vasodilation = Burns
150. Most important distinguishing feature between hypovolemic and septic shock = Temperature
151. Neurogenic shock = Loss of vasomotor tone (for details of shock see ch of blood)
152. Least mediator of endotoxic shock = IL6
153. Most common in all types of shock is = Tissue hypoxia
154. Cells not involve in acute inflammation = Lymphocytes
155. Mast cells release → Histamine and heparin.
156. Epitheloids cells are charetеretics of → Granuloma formation.
157. Mural thrombi are formed in = Aorta of heart.
158. Which is not form of emboli = Liquid
159. In the cellular events of inflammation, what occurs 1st → Margination.

IMMUNOLOGY & MUSCULOSKELETAL
Past Paper Bcq's with Quick Review

1.	Which antibody has memory function = IgG
2.	Most abundant antibody in normal individual = IgG
3.	What's the hallmark of aids = Progressive immune-depression?
4.	Features of type 2 hypersensitivity reaction = IgG
5.	Rheumatoid arthritis is an example of = Type 3 hypersensitivity reaction
6.	Myasthenia Gravis hypersensitivity = Type 2 hypersensitivity reaction (November – 2014)
7.	Antibodies present in hoshimoto thyroiditis → Antithyroglobin+antimicrosomal.
8.	Type1 hypersensitivity = Basophilia
9.	Mast cells release = Histamine
10.	AIDS virus not present in = Sweat
11.	AIDS dec = CD 4 cell
12.	Aids associated skin lesion = Kaposi sarcoma
13.	AIDS can b transmitted = Mother to baby
14.	Virus related to aids = EBV
15.	Confirmatory test for AIDS by = Westren blot (Aug 2014 med)
16.	After giving blood transfusion, patient develops hypersensitivity reaction = Type 2 hypersensitivity reaction.
17.	During blood transfusion = Type 1 hypersensitivity reaction
18.	IgE is found on surface of which cells = Eosinophil (aug 2014 med)
19.	Lady had breast implant 2 yrs ago since then she is having firmness and shape distortion something. Now the implants are removed and implant fluid is leaking inside. Which cells will most likely be present = Giant cells
20.	A 22-year-old girls report that she was eating peanuts and began to feel itchy, she then developed rash over most of the body, Chemical mediator for this lesion is= Mast cells
21.	Cells that increase in allergic conditions are = Mast cells (also basophils)
22.	Cortisol decreases which of the following cells = Lymphocytes
23.	In type 1 immunological reaction the response is mediated by = Antibodies
24.	Pt has h/o infection 4 weeks back "NOW" developed same pain again what type of cell present at this time of disease = Neutrophils (Now means recent dats y ans is neutrophil)
25.	Immunity against tumor via = NK cells
26.	Cancer cells combatted by = NK Cells
27.	Graves disease shows association with = HLA-DR3
28.	Arthus reaction = Type3
29.	Which human leukocyte antigen is most likely associated with rheumatoid arthritis = HLA DR4
30.	If a susceptible person were given tetanus Antitoxin, what kind of immunity would result = Artificial active
31.	Most imp opsonin for combating acute infection is = FC portion of IgG and C3b.
32.	Thymus is formed by = 3rd pharangeal pouch
33.	Regarding thymus = Superior mediastinum
34.	What is ture regarding T cell = Mostly T cell present peripheral
35.	Thymus contain large no. of lymphocytes.
36.	Which of the following receives sub-capsular afferents = Lymph node?
37.	Components of Innate immunity that are active against viral cells includes = NK cells
38.	Innate immunity responds best to = CHO in bacterial cell walls
39.	HLA subtype associated with SLE is = DR3
40.	HLA DR4 Association in an auto immune disease = Rheumatoid Arhritis

41.	Patient develops allergy, mast cells lie in which layer of skin = Dermis
42.	Most common aids defining infection in HIV = Pnuemocystitis carini
43.	Aids is associated with all of following except = Primary tumor of brain
44.	Earliest immunoglobulin to b synthesixed by the fetus = IgM
45.	Child with recurrent chest infection which of the following physiological antibody is missing on periphereal smear = IgA
46.	Type of Hypersensitivity in Hashimotos Thyroiditis = Type 2
47.	Which immunoglobin is present in RH incompatibility = IgG
48.	At birth presence of which immunoglobin indicates intrauterine infection in neonate = IgM
49.	Which immunoglobin passes through the placenta = IgG
50.	In the interpretation of Widal test the acceptable diagnostic titre would b of → 1:160 both O and H antigen.
51.	Function of CD4 all except = Cytotoxicity
52.	Which immunoglobulin pass through placenta = IgG
53.	A child is diagnosed with ITP (immune thrombocytopenic purpura). Immunoglobin responsible for ITP = IgG
54.	Patient has aplastic anemia, antithymocyts globulin was given, develop arthritis pleural eiffusion, hepatosplenmegaly fever, diagnosis = Type3 hypersensitvity rereaction
55.	A neonate with erythroblastosis fetalis is massively transfused with whole blood, after 10 days develops rash, first on palms, then face and trunk alongwith diarrhea, what is probable cause = GvH disease
56.	Feature of type 2 HSR = IgG
57.	In good pasture syndrome which type of collagen is targeted by auto antibodies = Type 4
58.	T cell receptor interacts with an antigen presenting cells = MHC
59.	Acute mild rejection of heart transplant. What will be the = Inc lymphocytes?
60.	Not HLA associated = Systemic sclerosis
61.	Cells responsible for innate immunity are activated most commonly by = Carbohydrate sequences in bacterial cell walls.
62.	Immunoglobulin present in tears = IgA
63.	Which provide immunity against tumor = NK cells
64.	In digorge's syndrome which T lymphocytes are still presen = Intra - epithelial lymphocytes
65.	Cytologic marker useful in the diagnosis of Hodgkins lymphoma = CD15
66.	Primaraliy B-cell marker = CD 19,20
67.	True about montoux test = Type 4 Hypersensitivity rex.
68.	MHC 1 = Cd8 + cells
69.	A 29-year-old intravenous drug user has suffered from recurrent pneumonias, fungal infections in the axillae, and a recent ear infection. He now presents with a cough and painful swallowing. Physical examination reveals a patchy, white oral lesion. Cells with which of the following markers are most likely to be deficient in this patient = CD4
70.	Most common manifestation of autoimmune disease is = Hemotological (robins patho)
71.	Systemic sclerosis is chareterised by → Excessive fibsrosis all over the body.
72.	A 51-year olsd well fed male developed sweeling of right big toe there was no hx of trauma most imp investigation would be = Plasma urea and uric acid.
73.	Most serious effect of diphtheria toxin is on = Heart.
74.	A Person with malignant melanoma risk factor = Prolonged sunlight
75.	Ankylosing spondylitis is is associat ed with = HLA B27
76.	Which of the following causes hypocalcemia = 25 hydroxy cholcalciferol?
77.	Inactivated toxin used as toxoid vaccine is used in = Tetanus
78.	Multiple fractures occur in which disease = Osteoporosis (also in cushing syndrome)

79.	Discharge from from muscle spindles decreases when = Muscle contracts
80.	ANA positive in = SLE
81.	Case of nodular swelling on dorsum surface of hand, brown pigment + axillary lymph node enlarged = UV radiation
82.	Epiotheloid cells are formed by → Activated macrophages.
83.	A lady wit h dysphagia, and complain that she is not able to type on keyboard but no other joint problems noted, also she has lost her wrinkles over f ace which had developed due t o aging: = Crest syndrome
84.	Aids associated skin lesion = Kapsoi sarcoma
85.	Ca- channels disease = Lambert Eaton syndrome
86.	Osteoblastoma most commonly occurs at vertebral bodies
87.	Periarticular erosion is a feature of = Rheumatoid arthritis
88.	1st somite to develop in human fetus = 1st occipital
89.	In which condition Ca remains normal = Osteoprosis
90.	Which is least likely involvd in osteoporosis = Increase estrogen?
91.	Most common cause of multiple fractures in adult = Osteoprosis
92.	Osteomalacia is associated with = Decrease in osteoid surface
93.	Feature of rickets and osteomalacia = Dec bone density
94.	A girl with frontal bossing, bowed legs & chest deformity = Vit. D deficiency
95.	A patient presents with polyuria and thirst stones, and nephrocalcinosis. He also has muscle weakness and bone pain all of the following is associated with his disease except = Less sunlight.
96.	Chalk- stick fractures occur in = Paget disease
97.	Dyskeratosia = Nail dystrophy.
98.	Diagnsion for leprosy intial tes is → Nasal scraping.
99.	Marker for malignant melanoma = S-100
100.	Mycosis fungoides effect = T-Cell
101.	Spongiosis not seen in = Acute eczema.
102.	Mysthenia gravis ant ibodies are present against = Nicotinic receptor
103.	Howship lacunae contain = osteoclast.
104.	Osteoclast cells are derived from = Monocyte
105.	Nutrition of bone is provided by = Osteoblast
106.	Which investigation confirm diagnosis of Gout = Arthrocentesis
107.	Which one of the following NSAID will more likely increase the acute attacks of Gout = Probencid?
108.	Weight bearing joints are rarely involved initially in = Psoriatic arthritis.
109.	50-year s old man is awakened in the middle of the night with acute pain & tender ness of the right knee. He has a low-grade fever. His knee is hot, tender & swollen. Analysis of f fluid from right knee shows: leukocyt es 70,000/ mm3 wit h 75% neut rophils, crystal analysis = Negative birefregent, gram stain = Negative the most likely diagnosis is = Gout
110.	In gout negative bif regnant type scenario is given = Mono sodium urate
111.	A 5- or 6-years child who develops muscular weakness annti voltage gated calcium chanel ant ibodies are present = Lambert eaton syndrome
112.	Most common skin cancer in HI V = Sq. Cell car cinoma
113.	A 14 yr child presented with bone growt h in Diaphysis, rdiolucent, surrounded by sclerotic bone, most likely diagnosis = Ewing sarcoma
114.	Regarding isotonic and isometric contraction isotonic contraction = Isontonic muscle uses high energy phosphate bonds (fganong 22nd edition bcq)
115.	Drug act on Neuromuscular Junction = Tubocurarine

116.	Muscle spindle activated when = Muscle stretch
117.	Most common tumour of child in epiphysis is = Giant cell tumour
118.	A female pt was having generalized pain, and has been taking NSAIDs for a long time. Now developed swelling in big toe, what will be present in fluid aspirate = Monosodium urate crystals.
119.	Which str ucture binds cytoskeleton with ECM. = Integrins
120.	Patient with muscle weakness and bilateral ptosis. Which invest igations you will do = Acetylcholine receptors antibodies.
121.	Which prevents muscle from tearing under pressure = GTO
122.	Patient with discoid rash, arthritis and hemolytic anemia whats most specific investigation = Anti ds DNA ab
123.	Most aggressive CA = Melanoma
124.	Child with loose skin with easy bruisability and defective procollagen what can be the most striking symptom / complication = Hyper mobile joints (Ehlor Danlos syndrome)
125.	A 50 years old man with arthritis from last 5-year s. Left and right cardiomyopat hy and raised Ferritin. Which other investigation will help in Dx = Anti centromere antibodies
126.	Strongest joint of human body is = Hip joint.
127.	Muscle attached to bone by = Tendon.
128.	Epiphysial bone tumor = Giant Cell tumour
129.	A person was walking bare feet suddenly stepped upon some sharp object. He quickly removed his leg due to which reflex = Multisynaptic reflex
130.	Scienerio of achondroplasia = Autosomal Dominant
131.	Neuron peak of Action potential = Electric gradient to send Na into the cell
132.	Heart shape vertebrae = Thoracic vertebra
133.	Type of collagen in dermis of skin = Type 1
134.	Characteristic feature of long bone = Haversian canal
135.	Skin pressed with sharp needle for sometime redness due to = Axonal reflex
136.	Blood supply of skin lies in = Loose areolar tissues
137.	Logest spine is of → C7
138.	Cells to cells adhesion = Integrins
139.	Pre-malignant lesion of skin = Actinic keratosis
140.	Osteoblastoma most common site is = Vertebrae
141.	Tip of scapula at body level of = T 7 body
142.	About collagen fibers = Stained with Eosin dye
143.	Hyper calcemia activated = 1,25 dihydroxy calciferol
144.	Most sensitive marker for rheumatoid arthritis is = Anti CCP
145.	All of the following are pneumatic bones except = Parietal
146.	In long bones from secondary centre of ossification what is formed = Epiphysis
147.	Primary center of ossification at Epiphysis of Long bone at Birth = Lower end of Femur.
148.	Compact bone contains = Osteoblast cells in lacunar spaces
149.	A 14 yr child presented with bone growth in Diaphysis, radiolucent, surrounded by sclerotomic bone, most likely diagnosis = Ewing sarcoma
150.	Osteocytes convert into bone cells due to the effect of which hormone = Thyroxine
151.	In Rheumatoid arthritis raynauds phenomena is common.
152.	Which of the following is a recognized feature of rheumat oid arthritis on x-ray = Bone Erosions?
153.	Most sensitive test for SLE = ANA
154.	Squamous cell carcinoma is associated with = Actinic keratosis
155.	Sarcoidosis histological picture = Ganuloma with asteroid bodies

156.	Lymph node biopsy shows non caseating granuloma = Sarcoidosis

NEOPLASIA

PAST PAPER BCQ'S WITH QUICK REVIEW

1.	The tumor which is the ovarian counter part of seminoma of the testis is = Dysgerminoma
2.	A Person wid malignant melanoma. Risk factor = Xeroderma pigmentosum
3.	Premalignant lesion = Compound nevus.
4.	Radiation causes change through= Protooncogen.
5.	A tumor with all germ layers = Teratoma.
6.	Acoustic neuroma. = Vestibular component of CN 8.
7.	BCC features. Most likely = Locally malignant.
8.	Cholangiocarcinoma caused by = Cholonorchis Sinensis.
9.	Chronic Myeloid Leukemia = Chromosome 9 & 22
10.	Diff: Malignant and Benign tumors = Metastasis
11.	Following is not a tumor marker = Acid Phospatase
12.	Hydrocarbon cozs = bronchogenic carcinoma.
13.	Lung carcinoma fungiform growth. = Squamous cell carcinoma.
14.	Microscopic feature Malignant tumor = Local invasion.
15.	Most common ca of epiphysis = Osteoblastoma (if Giant cell tumor ispresent in options click that)
16.	Most common found in lung tumors is = Adenocarcinoma
17.	Prostatic carcinoma spread to skull bones through = Vertebral plexus
18.	Radiotherapy most sensitive to = Craniopharyngioma (Seminoma >> Glial Glioma >> Craniopharyngioma)
19.	Superficial parotid painless tumor, psudopoid growth, contain no capsule on histopatho = pleomorphic adenoma.
20.	Tumor in children with blue cells and high levels of catecholamines = Neuroblastoma
21.	Which ca rarely metastasizes = Basal cell carcinoma.
22.	Which ca spreads to large vessels = Clear cell ca of kidney (even this carcinoma can reach the heart through inferior vena cava.
23.	Which carcinoma doesnt show distant metastasis = Basal cell Carcinoma
24.	Which of the following statements about carcinogenesis is false = Papilloma viruses produce tumors in animals but not in humans.
25.	Which one is most common exocrine pancreas tumor = Ductal adenocarcinoma
26.	Acoustic neuroma. = Vestibular component of CN 8.
27.	Chronic Myeloid Leukemia = Chromosome 9 & 22
28.	Presence of pancreatic tissue in gastric mucosa = Choriostoma
29.	Not predisposed the cancer = Bacterial products
30.	Premalignant lesion = Compound nevus.
31.	Radiation causes change of = Protooncogen.
32.	BCC features most likely = Locally invasive
33.	Most effected organ by dental radiology = Thyroid
34.	Diff: Malignant and Benign tumors = Metastasis
35.	Following is not a tumor marker = Acid Phospatase
36.	Hydrocarbon cozs = Bronchogenic carcinoma.
37.	Lung carcinoma fungiform growth = Squamous cell carcinoma.
38.	Microscopic feature Malignant tumor = Invasion.
39.	Most common ca of epiphysis = Osteoblastoma (if Giant cell tumor is present in options click that)
40.	Common site of malignancy in patients suffering from outbreaks = Hematopoiietic

41.	Not a carcinogenic = Alcohol
42.	Hamartroma = Benign tumor
43.	Least common site of malignancy = Spleen
44.	Diagnostic criteria for pre-malignant condition = Pleomorphism
45.	Diagnostic criteria for malignant tumors = Metastasis
46.	Diagnostic criteria for soft tissue tumor = Increased vascularity
47.	Most radiosensitive cell = Lymph node
48.	Sarcomas have = Increased vascularity
49.	Bladder CA = Transitional cell ca
50.	Slowest growing tumor = Papillary cell ca
51.	Carcinoma due to which chemical exposure = CCl4
52.	Tumor without bone metastasis = Liver ca
53.	Most cancers have which filament = Keratin
54.	Paraneoplastic syndrome = Small cell ca
55.	Not a epithelium tumor = Liposarcoma
56.	Tumor involving lymph vessels = Cystic hygroma
57.	Best method to detect malignancy = Histopathology
58.	Staging is method of determining = Metastasis
59.	Most lethal premalignant lesion of oral cavity = Erythroplakia
60.	Tumor spread by = Breakdown of E-cadherin
61.	Tumor suppressor Gene = Ras
62.	Condition doesnot produce hormones = Chondrosarcoma
63.	Hormone abundant in fetus but in adults increased level associated with ca colon = CEA
64.	Not a tumor marker = Vesmin
65.	Asbestos workers are exposed to = Malignancy
66.	Hypercalcemia associated with malignancy = PTHrp
67.	Most radiosensitive phase of cell cycle = M phase
68.	Dividing cancer cells derive energy from = Glycolysis
69.	Caspases are associated with = Organogenesis
70.	Smoking is not associated with = Nasopharyngeal ca
71.	Not a precarcinogenic = House dust
72.	Which component of neoplasm determines its biologic behaviour = The parenchyma
73.	Most tumors are = Monoclonal in origin
74.	Loss of architectural orientation = Dysplasia
75.	Capsule of benign neoplasm derived from = Stroma
76.	Leukoplakia = Precancerous lesion
77.	Most common lesion of oral cavity = Leukoplakia
78.	Most lethal lesion of oral cavity = Erythroplakia
79.	Most lethal condition of oral cavity = Lichen planus
80.	Reversible, abnormal shape, size & loss of cellular orientation is = Dysplasia
81.	Radiation usually cause cancer after = 5 – 10 years
82.	Broder classification of tumor based on = Degree of differentiation
83.	Most common association of penile squamous intraepithelial neoplasia = Phimosis
84.	Sarcomas are most commonly metastasized by = Blood
85.	Commonest child hood malignancy = Leukemia
86.	Commonest childhood Renal malignancy = Wilms tumor
87.	Mammography reduces prevalence of CA breast upto = 30%
88.	Virus cause cancer because of = Oncogene
89.	Most common salivary gland carcinoma = Parotid gland ca
90.	Effect of hyperparathyroidism in carcinoma lung is due to = Arathyroid like protein
91.	Hypercalcemia not related to = Ovarian carcinoma
92.	Which will not present in lung hamartroma = Cartilage in lesion area

93.	Tumor refractory to chemotherapy except = Soft tissue sarcoma
94.	Complete cure is possible in following cancer except = Breast cancer
95.	Cell survival is due to = P53
96.	Cancer in men in descending order = Prostrate, lung, colorectal ca
97.	Cancer in female decreasing order = Breast, lung, colorectal, gynaecological cancer
98.	Black have more risk for = All cancers
99.	Most common cause of cancer death in adults = Lung cancer
100.	Nasoparyngeal ca is due to = EBV
101.	Actinic keratosis is precursor of squamous cell carcinoma
102.	Cervical pap smear responsible for decreasing incidence of cervical cancer
103.	PSA is more sensitive than specific for ca prostate.
104.	Commonest type of mutation = Point mutation
105.	Responsible for normal growth and repair = Proto oncogene
106.	Protected against unregulated cell growth = Suppressor genes
107.	Sequence of carcinogenesis = Initiation-promotion-progression
108.	Oral contraceptive can cause = Ca breast and ca cervix
109.	Common malignancy due to ionization radiation = Leukemia
110.	Commonest malignancy due to UV light = Basal cell carcinoma
111.	Common cause of death in cancers = Gram negative sepsis
112.	In cachexia pivitol role played by = Alpha Tnf
113.	Acanthosis is associated with = Stomach ca
114.	Tumor marker of medullary ca = Calcitonin
115.	Almost never develops after radiation = CLL
116.	Most likely to cause mutation of proto oncogenes = Ionizing radiation
117.	Tumor marker for prostrate ca = PSA
118.	Tumor suppresser gene = P53

HISTOLOGY
PAST PAPER BCQ'S WITH QUICK REVIEW

1. Oesophagus = Has stratified squamous in upper 1/3.
2. Epithelium of preterminal bronchiole/conducting zone = Pseudo stratified columnar ciliated with goblets in larger bronchiole (in resp bronchioles> cuboidal, then simple squamous upto the alveoli] {clara cells in terminal bronchioles.
3. Chronic hepatitis = Fibrosis.
4. Epithelium of Vagina: stratified squamous epithelium with abundant elastic tissue in sub mucosa, highly vascular, smooth muscles.
5. Epithelium of Ureter: small lumen tubular structure lined by transitional epithelium, with complete muscular coat.
6. IgA nephropathy on = Mesangeal deposit.
7. Pseudostartified columnar epithelium, C.T stroma, smooth muscle = prostrate
8. Epithelium Of cornea – Stratified squamous non-keratinized.
9. Collagen fibers – Eosin stain.
10. Stratified squamous epithelium with lymphoid aggregation = palatine tonsil
11. Whip like ciliary movement = uterine tube
12. Pseudostartified columnar epithelium on one side, stratified squamous non keratinized epithelium on other side = soft palate and uvula
13. Rich in lymphocytes = thymus
14. Having glycolytic enzyme activity=RBCs
15. Myelin in CNS formed by = oligodendrocytes
16. Lymph nodule absent in = thymus
17. End arteries present in = heart, spleen, retina
18. Strongest layer of small intestine = submucosa
19. Startified squamous epithelium in upper 1/3rd = oesophagus
20. Erythropoietin secreted from = peritubular interestitium of kidney
21. Medullary rays present in = collecting tubules of cortex
22. RBC shape maintained by = spectrin and ankyrin
23. Absent in axon hillock = RER
24. Simple cuboidal = ovary
25. Startified squamous with increased vascularity, cellularity, elasticity and tubular glands = vagina
26. Structure with 3 layers of muscles = fundus of stomach
27. Correct sequence for kidney = renal, interlobar, interlobular, arcuate, efferent
28. True about appendix = no taenia coli
29. Not present in bowmAns: capsule = stratified epithelium
30. Axon doesnot contains - nissle substance
31. Extensive muscular folds = gall bladder
32. Epithelloid cells in granuloma formed by = monocytes
33. Epithellium changes according to state of activity = thyroid
34. True about pitutart = no portal vessel between hypothalamus and post pituitary

35. Most abundant phagocytic cells in circulation = neutrophils
36. Submucosal glands present in = duodenum
37. Monocytes are not = phagocytic
38. Nissel bodies are = RER
39. Most mucus acini = sublingual gland
40. Maximum haemoglobin production occurs in = Late normoblast
41. Fibrocartilage present in = intervertebral discs
42. True about platelet = no nucleus
43. Basophilia of cell due to = RER
44. Pseudostartified columnar ciliated epithelium = larynx
45. Not a part of epidermis = pacinian corpuscle
46. Neuron in olfactory tract = bipolar
47. Choroidal plexus of ventricles = simple columnar epithelium
48. Integrity of cell maintained by = cytoskeleton
49. Newly formed elastic cartilage looks yellow and dense due to large no of elastic fibres
50. Compact bone contains = osteoblast cells
51. Simple cuboidal epithelium = ducts of salivary gland
52. Immune mechanism of liver = kuffer cells
53. Primary ossification centre = diaphysis
54. Microtubules part of = centrioles
55. Islet of haematopoiesis in utero = yolk sac
56. Mucus is absent in terminal bronchioles
57. Not a major basic tissue = blood
58. Basophillia of cells is due to = ribosomes
59. End arterioles = Central retinal artery
60. True about hyaline cartilages are = collagen fibers are not visible
61. Medullary rays of kidney contain = collecting duct

EMBRYOLOGY
PAST PAPER BCQ'S WITH QUICK REVIEW

1.	3-8 weeks = embryonic period, this is most sensitive to teratogens, while fetal period starts after week 8
2.	2nd arch derivative = Stylohyoid
3.	Cardiac defects in fetus of mother suffering from rubella infection will occur if = 5 th to 10th week
4.	Infant with absense of limb cause is = amniotc bands
5.	Median umblical ligament is remnant of = Urachus.
6.	Thyroid follicles that release hormone are derived from = Endoderm.
7.	What age the head of fetus become exactly half the length at CRL = 3rd month
8.	A pt presented with an opening in the ant wall of sternocledomastoid muscle with pussy discharge coming out of it this problem occurred due to abnormality in one of the following = 2nd pharyngeal cleft.
9.	Adult derivative of notochord is: = Nucleus pulposis
10.	Age estimation at 5th to 12th week is done through: = crown rump length
11.	All drugs transported from Placenta by this mechanism = involves carriers (also note that amino acids and fatty acids uses facilitated diffusion)
12.	Defect of neural tube, which marker increase. =AFP
13.	Diaphragmatic hernia occurs due to = absence of pleuro-peritoneal membrane
14.	Most common congenital heart defect=VSD
15.	Extra coelomic membrane = Hypoblast (Hi yield says epiblast and langman states hypoblast)
16.	Foetal period starts after which week =8th.
17.	Liver Develops from = ventral mesentry proximal foregut.
18.	Premature baby born most common finding is =PDA
19.	Superior parathyroid gland develops from = 4th brachial pouch
20.	Thymus develops from = endoderm of 3rd brachial pouch.
21.	Ureteric bud is formed as a part of = Mesonephric duct.
22.	Vertebrae is derived from = Sclerotome
23.	Continuous diastolic and systolic murmur=PDA
24.	Normal fetal heart rate=140
25.	PDA is persistant part of=6th Arch
26.	Heart developes in=4th week
27.	Affected part in intra ventricular septal defect=pulmonary
28.	Commonest causa of PDA=Prematurity
29.	Septum primum Ans: septum scundum fuse to form=Right and left atrium
30.	Definitive heart formed in=Beginning of 5th week
31.	Ligamentum arteriosum remanant of=Ductus Arteriosus
32.	Left to right dynein. dextrocardia=kartagener syndrome
33.	Aortic and pulmonary valve develops from=endocardial cushion of outflow tract
34.	Blood in umbilical vein =80% saturation of oxygen
35.	Child with cyanosis and weak pulse=Trans position of great vessels.
36.	Most common congenital cardiac defect=VSD
37.	Paradoxical emboli is complication of=ASD
38.	Clubbing, cyanosis and polycythemia in=Essminger syndrome
39.	Machine like murmur and low Sao2=PDA
40.	Drug close PDA=Indomethacin
41.	Notochord is derivative of=Nucleus pulposus
42.	Fixed spiliting=ASD
43.	Congenital heart disease occurs in=3-8 weeks.
44.	Associated with turners syndrome=coaraction of Aorta
45.	Cardiac defect occurs in fetus of diabetic mother=Transposition of Great vessels.
46.	Urteric bud does not grow towards metanephric cap causes a=Absent ureter
47.	Most common site for obstruction =Uretro pelvic junction
48.	Cause of death in potter syndrome =Pulmonory hypoplesia
49.	A child with twisted face low set ears diagnose =Potter
50.	Poly cystic kidney dieases in child=Autosomal recessive
51.	Horse shoe kidney get trapped under =Inferior mesenteric artery
52.	Collecting tubule of kidney drived from=Urteric bud

53.	PCT devlop from = Meta nephric duct
54.	JG cells are =Smooth musculature cells of afferent
55.	Transitional epithum in=Renal pelvis
56.	Urachal cyst is remnanat of allantois
57.	Germs layers derive from=mesoderm
58.	Spermatogenesis is controlled by FSH+testosterone
59.	CRL at 17 to 20 weeks=13-17cm

GENETICS

Past Paper Bcq's with Quick Review

1.	A pt came to you with primary amenorrhea, webbed neck, short stature diagnosed as Turner syndrome, what is her karyotype = A.45XO
2.	Hyperobesity syndrome is → Plader walli syndrome.
3.	A tall man with normal external genitalia married but had no kids he had normal ejaculation period but semen analysis showed azospermia cause may be = Sertoli cell
4.	Barr body is found in the following phase of the cell cycle = Interphase
5.	Pseudo hermaphrodite With 46xy = Adrenogenital synd.
6.	Scenario Achondroplasia = Autosomal dominant
7.	What is true about DNA = Double stranded in which two strands are antiparallel to each other
8.	For chromosomal analysis best test is → Karyotyping
9.	Bar body TEST is diagnostic for = Turner
10.	Scanty bar body or no bar body then = Turner
11.	Cause of Mental retardation = Fragile X Syndrome (if down syndrome is mentioned then click it, because Fragile X syndrome is the 2nd most common cause)
12.	Chromatid align at equatorial plate = Metaphase(also chromosal study is carried out in metaphase, and if asked replication of any organelle click interphase).
13.	Down's syndrome = Trisomy 21
14.	Downs Syndrome = Increase incidence with increasing mother age
15.	In Turner syndrome, the genotype would be = XO
16.	Most common Inheritance pattern = Multifactorial.
17.	Which Cells have telomerase = Germ cells.
18.	Hypogonadism is most authentic sign of klinfelter.
19.	Klinfelters syndrome = Less chances of mental retardation
20.	Hereditary spherocytosis = Autosomal dominant
21.	Baby with polycystic kidney = Autosomal recessive
22.	Adult polyystic kidney disease = Autosomal dominant
23.	Normal looking girl with primary amenorrhea on examination having short blind vagina with normal vulva, scanty pubic and axillary hairs normal breast absent uterus her karyotype is = 46xy
24.	Best option for identification of turner's syndrome = Ultrasound
25.	Allelle is = Non-identical genes
26.	Klinfelters syndrome = Extra X chromosome
27.	In autosomal recessive diseas = Chance of 1:4 in all siblings
28.	True hermaphrodite = XXY
29.	Gynecomastia = Klinfelters syndrome
30.	Turners syndrome most definitive diagnostic test = Chromosomal analysis

31.	Cause of flat facies, oblique fissure and mental retardation = Down syndrome
32.	Risk of down syndrome in next child = 33%
33.	Autosomal dominant disease = Unaffected children have 50%chance of transmission of gene from affected parent.
34.	Achondroplasia = Autosomal dominant
35.	A child with recurrent episodes of respiratory tract infections, otitis media with history of same disease in family what test u will perform = Sweat chloride test
36.	Amniocentesis shows 47xxy diagnosis is = Klinfelters syndrome
37.	A child with hypotonia, mental retardation, hypermobility, protruded tongue umbilical hernia = Trisomy 21
38.	Turner syndrome = Short stature
39.	Chromosomal anomaly associated with alzheimers disease = Trisomy 21
40.	Accumulation of sphingomylein in phagocytic cells is a feature of = Niemann pick disease
41.	Child with seborrheic dermatitis, lytic skull lesions, ear discharge, hepatosplenomegaly, likely diagnosis = Histiocytosis X
42.	Male are more commonly affected than females in = X linked recessive diseases
43.	Carcinoma with autosomal dominant inheritance = Retinoblastoma
44.	Hemophilia is = X linked recessive
45.	Alpha 1 antitrypsin deficiency = Autosomal recessive
46.	Most common type of mendelian disorder = Autosomal recessive
47.	Most common autosomal recessive disorder = Hemochromatosis
48.	Most cmmon autosomal dominant disorder = Von willbrand disease
49.	Most common X linked disorder = Fragile x syndrome
50.	Barr body is attatched to nuclear membrane
51.	Y chromosome determine the genetic sex of individual
52.	Most common cause of male pseudohermaphrodite = Testicular feminization
53.	Most common pathogen causing congenital infection = CMV
54.	Spontaneous abortion = Trisomy 16
55.	Most common cause of neonatal death = Prematurity
56.	IUGR infants = Oligohydroamnios
57.	Neonatal period = First 4 weeks
58.	Triple marker for Downs syndrome = Decreased AFP, increased HCG, decreased urine estriol
59.	Pyogenic disorders are more common than mendelian and chromosomal disorders
60.	Mitochondrial DNA disorder is associated with maternal inheritance.
61.	2nd most common cause of mental retardation is fragile X syndrome.

BIOCHEMISTRY
PAST PAPER BCQ'S WITH QUICK REVIEW

1.	Which utilizes glucose only = Rbc.
2.	H_20_2 in which organelle = Peroxisomes
3.	Cholestrol is precursor of = Steroid hormone.
4.	Among vitamins strong antioxidant = Vit. E > Vit C
5.	High cholesterol = LDL
6.	High protein = HDL
7.	TGs = chylomicron > VLDL (ref harpers)
8.	Anion gap = Diff between measured cation and measured anion
9.	Antioxidant Vitamin = Vit. E (Remember if asked Potent one then = Glutathion > Vit. E
10.	Correct Sequence of Protien Synthesis is = MRNA Cytoplasm, Ribosome, tRna, Amino Acids.
11.	Decrease in ESR is due increase in = Albumin.
12.	Essential amino acid = Phenylalanine
13.	Essential fatty acid = Linoliec acid (Also Linolenic Acid is among essentials).
14.	For conversion of glucose-1-phosphate to glucose-6-phosphate require = Isomerase its actually phosphoGlucomutase, but if not present in options, click isomerase.
15.	For transfer of radicals from one group to another = Transferase (Note that; oxidoreductases catalyze oxidation reduction reactions, ie electrons are transferred, while transferase transfers moieties from donor to recipient).
16.	Glycocalyx contains = Carbohydrate moiety.
17.	Only source of glucose = RBCs (see First Aid) Brain can utilise ketones in starvation but RBCs have no source other than glucose.
18.	Irreversible step in Glycolysis = Glucose to Fructose-6-Phosphate.
19.	Most imp buffer in = HCO_3
20.	Not a feature of malnutrition in adults = Thrombocytopenia.
21.	Osmolarity of Human plasma = Similar to 0.9 % N/S
22.	Patient with Gastrectomy presents with Anemia after One and half year, what will you give = Vit. B12
23.	Precursor of steriod hormone is = Cholesterol
24.	Type 3 collagen (ehler danlos syndrome) = Hypermobility of joints.
25.	Tyrosine derivative doesn't include = Prolactin
26.	Which step z common in glycolysis and gluconeogenesis = Fructose-1,6-bisphosphate tofructose-6-phosphate.
27.	Which vitamin act as cofactor in oxidation of fatty acids = Biotin
28.	Purines = 2 Rings
29.	Pyrimidine = 1 ring
30.	Nucleoside = Base + Deoxyribose sugar
31.	Nucleotide = Base + Deoxyribose sugar + Phosphate
32.	De novo purine synthesis inhibited by = Azathioprine
33.	Increased ALP but normal GGT = Liver is not involved
34.	Stop codon = UGA, UAA, UAG
35.	Most numerous RNA = RNA
36.	Most largest RNA = MRNA

37.	Smallest RNA = tRNA
38.	Intracellular proteins involved in maintain protein folding = Chaperone protein
39.	Protein synthesis = RER
40.	Protein storage = Golgi apparatus
41.	Scar tissue strength = Type 1 collagen
42.	Granulation tissue strength = Type 3 collagen
43.	Wound repair = Type 3 collagen
44.	Wound contraction = Type 1 collagen+myofibroblast
45.	Most abundant collagen = Type 1
46.	Ehler danlos syndrome due to = Deficiency of type 3 collagen
47.	Alport syndrome due to=deficiency of = Type 4 collagen
48.	Defect in formation of triple helix = Type 1 collagen
49.	Osteogenesis imperfect = Autosomal dominant
50.	Used to profile for gene expression = Microarrays
51.	Mitochondrial inherited disease = Heteroplasmy
52.	Autosomal dominant = At least 1parent involved
53.	Autosomal recessive = 1:4
54.	X linked = 50% affected
55.	Mitohondrial inheritance = Red ragged fibers
56.	Hereditary spherocytosis = RBC membrane defect
57.	Duchene dystrophy common cause of death = Dilated cardiomyopathy
58.	Duchene dystrophy = X linked frameshift mutation
59.	Becker dystrophy = X linked point mutation
60.	Severe dystrophy = Duchene
61.	Vitamin A used for which leukemia = AML
62.	Bit B1 defficiency causes = Lactic acidosis
63.	High output cardiac failure = Wet beri beri
64.	Cofactor in redox reactions = B2
65.	CO factor for acyl transferase = B5
66.	Homocystinurea = B6,homocystinemia due to B12
67.	CO factor for carboxylation reaction = B7
68.	Commenest deficieny in united states = Vit B9
69.	B12 absorbed in = Terminal ileum
70.	Max water absorbed in = Jejenum
71.	Muscle bone,joint pain poor wound healin cockscrew hair anemis = Vit. C DEF: scurvy
72.	Net ATP production aerobic metabolism = 38
73.	ATP production in TCA cycle = 10
74.	Every amino acid occurs in 2 forms except = Glycine
75.	Sulfur containing amino acid = Methionine, cystine, homocystine
76.	Amino acid cause infection = Glycine
77.	Epinephrine formed from = Phenylalanine
78.	Most common lysosomal storage disease = Gauchers disease
79.	Lysosomal disorder without hepatosplenomegalu = Tay sachs disease
80.	Lysosomal disorder with neurodegeneration = NIemann pick disease
81.	Hurler syndrome = Autosomal recessive
82.	Hunter syndrome = X recessive
83.	Urine test for ketones doesnot detect = Beta hydroxyl butyrate
84.	Essential fatty acid = Linoleic acid and linolenic acid
85.	Major portion of TAG = Chylomicron
86.	NeurotrAns:mitter present in spinal cord = Glycine
87.	Milk is deficient in = Pantothenic acid cpsp key
88.	Non essential aminoacid = Tyrosine

89.	Ketogenic aminoacid = Leucine
90.	Hydrolysis of Dna gives = Phosphoric acid
91.	Highest cholesterol content = LDL
92.	Epinephrine.dopamine derived from = Tyrosine
93.	End product of purine metabolism = Uric acid
94.	Subacute combined degeneration of spinal cord due to = Thiamine deficiency
95.	If carbohydrate separated from protein = Aggregation and precipitation
96.	Without sulfa group = Threonine
97.	1gram of protein = 4.1kcal
98.	Genes are composed of = Dna
99.	Richest in triglycerides = Chylomicrons 85-88%
100.	End product of glucose metabolism = 2 molecuoles of pyruvate
101.	Essential aminoacid = Phenylalanine
102.	Vitamin rich diet = Green vegetables
103.	Highest energy compound = ATP
104.	Not a phospholipiplasminogen
105.	Human being can survive without = Lipids
106.	Vitamin for transamination = B6
107.	Miscelles absorbes fats in = Duodenum
108.	Dry heat kills bacteria by = Coagulation of proteins
109.	Hypervitaminosis A cause = Scaly dermatitis
110.	Magnesium stored in = Bone
111.	Dietary fiber contains = Pectin
112.	Source of folic acid = Vegetables
113.	Thiamine Level monitored by = Transketolase level in RBC
114.	Phenyalanine not a precursor of = Melatonin
115.	Elasticity is due to = Keratin
116.	In dividing cells spindle is formed by = Tubulin
117.	Protein rich in aminoacids in DNA = Histones
118.	Basic aminoacids are = Lysine, arginine
119.	Insulin donot stimulate = Ketogenesis
120.	Non-essential mineral = Lead
121.	Negative coronary risk factor = Inc HDL
122.	Iodine excreted in = Urine

BIOSTATICS
PAST PAPER BCQ'S WITH QUICK REVIEW

1.	Screening is done = To detect disease at its early stage.
2.	Regarding P Value = Checks probability (P for P VALUE and P for Probability).
3.	Remember PPP = Positive Predictive value is affected by Prevalence).
4.	How good is a test at correctly diagnosi diagnosing people with the condition? Feature qualifies = Sensitivity.
5.	Confidence interval = Mean n its standard error of mean.
6.	Positive Predictve valve is affected by = Prevalence of disese.
7.	A statistical test observed differences b/w 2 meAns: been by chance = Variance.
8.	Pts of different races are coming at emergency, 50% are whites, 20% blacks, 30% Asians best way to depict there percentages is: pie chart.
9.	Study in which every person of a population has equal chances of being selected: Random sampling.
10.	Standard deviation shows = Variability among individuals.
11.	Case control typical scenario = Disease and not diseased.
12.	Data is collected for some clinical trial based on presence or absence of Vomiting. What type of data it is = Nominal (whenever asked about nominal remember = it's the data type where you have to Ans: between the two variables like yes or no, right or wrong, presence or abscence etc while ordinal gives u order like primary > secondary > tirtiary)
13.	Prevalence is = All existing cases
14.	Prevalence: All current cases (old & new) while incidence is just new cases
15.	What is median if values are 20 20 25 30 35 40 25 30 = 27.5
16.	Confidentiality can be breached = If patient authorize you.
17.	Medical ethis. = Moral code of conduct of doctr professional life
18.	Doctor patient relations and how good doctor is known by → His pleasant behaviour and bed sidemanners.
19.	Pt was brought into the Emergency Department and his family wanted to accompany him. What is the most appropriate response = Only pt should be allowed in the ER.
20.	Stastical average applicable to = Mean
21.	If test is able to diagnose and eliminate disease = Sensitive
22.	Variance related to = Variability
23.	T test shows = Relation of 2 paired, means.
24.	Treatment of streptococcal by sulphonamide and penicillin by random selection = Single blind
25.	Incidence = Number of new cases
26.	Prevalance = Number of total cases
27.	In behavioural sciences, professionalism of doctor judged by = Punctuality
28.	In order to disclose news regarding fatal Didease = Patient should know first
29.	Sample which is aged based grouped then random peole taken from each group it is = Stratified Random sampling.
30.	37% post menopausal taking HRT 63% not taking HRT, shown by = PIE chart
31.	Strenthning factor for doctor patient relationship = Active listening.
32.	Square root of variance = Standard deviation
33.	Mean increases with = Decrease in sample size
34.	Patient suffering from malignant disease = Provide crisp, clear information to the patient.
35.	Normal distribution curve = Positive skewing, peak on right side
36.	Imp.criteria for screening of cancer = Detection at early stage
37.	2/2 table = Chi square test
38.	Bad news delievered = In doctors office, formal session, in environment of exclusively
39.	17yr old girl terminally ill asks you am i going to die, best approach is = What have your parents told you.

40.	Age based sample grouped then random people taken from each group = Stratified random sampling
41.	Chi square Test used for = Association between two variables
42.	True positive+false positive = PPV
43.	Standard normal distribution = Variance 1.0
44.	Specificity denotes = True negative
45.	Confidence interval = Mean and its standard error of mean
46.	PPV affected by = Prevalance. 5th feb 2015
47.	Square root of variance is = Standard Daviation

PHARMACOLOGY

Past Paper Bcq's with Quick Review

1.	Allergic reaction with hypotension = I/m adrenaline.
2.	Basic drug binds = Alphaglycoprotein (while acidic drugs bind albumin).
3.	Drug used to treat Endometriosis = Medroxy pregesteron acetate (click leuprolide if medroxy is not in options)
4.	Effect of drug on a body = Pharmodynamics
5.	Isoniazid causes side effects which can be prevented by taking which vitamin = Pyridoxine
6.	Patient was admitted in the ICU, HE had a central venous catheter for 10 days. HE started having fevers. cultures were sent. It came back positive for Gram positive cocci in clusters. What medication will you start = Vancomycin
7.	Patient was brought to the ER unconscious. The doctor gave Naloxone but it was not working. What is the likely cause of toxicity = Phenobarbital.
8.	Most common S/E of use of histamine 1 blocker = Sedation
9.	About Lignocaine what is true = Prevents influx of Na ions across membrane
10.	Absolute contraindication of Propofol is = Hypersensitivity.
11.	Always mark Vancomycin if CVP line, Indwelling catheter or double lumen site Infection especially in hospitalized patient and that too in ICU or dialysis units. High prevalence of MRSA.
12.	Analgesic causing tachycardia in therapeutic dose = Pethidine
13.	Biguanides side affects = Diarrhea and flatulence
14.	Bromocriptine reversed amenorrhea mechanism of action is = It acts as dopamine agonist.
15.	Bupivacain first sign of over doze = Ringing in ears (if asked about serious adverse effect, prefer arrythmias).
16.	Dicumarol side effect = Inc prothrombin time.
17.	Drug causing peripheral neuro and pancreatits = Diadenosine
18.	Drug causng to inhibit breast ca metastsis to liver = Tamoxiphen
19.	Edrophonium most common adverse effect = Nausea.
20.	Erythropoietin secretion is inhibited by = Theophylline
21.	Following is a good analgesic but weak anaesthetic = NO
22.	INR is for = Oral anticoagulation therapy: For warfarin monitering INR >>> PT)
23.	ketorolac analgesia most preferable = Non-diabetic female undergoing cholecystectomy
24.	Lithium is a toxic antipsychotic. when should it be stopped = coarse tremors (katzung states; lithium causes Fine tremors in therapeutic dose and coarse tremors in toxic dose)

25.	Mifepriston through = Progesteron antagonist (Miferpristone stimulate uterine contractility 'antiprogestin' also increases prostaglandins by inhinhibiting prostaglandin dehydrogenase).
26.	Daily dose of lithium is from = 400 mg
27.	MOA of steroids in Inflammation is = Inhibiting phospholipase.
28.	Threupatic index indicates → Safety of drugs.
29.	Patient taking propranolol develops increased PR interval. what is the cause = Drug induced 1st degree heart block?
30.	Phenyl over alcohol anaesthesia = Less painful (Alcohol is Very Potent and Excruciatingly Painful).
31.	Pregnant women 1st trimester develops Atrial fibrillation what would u give = IV Heparin
32.	Ranitidine is different from cemitidine as = It has less CNS toxicity
33.	Regarding indication of furosemide = Acute pulmonary edema
34.	Regarding tramadol true is = Weak meu agonist
35.	Systemic fungal infection drug given. =Amphotericin
36.	Tuberculin test (Negative) = Taking immunosuppressive drugs
37.	Early sign of Vitamin A defficiency = Night blindness
38.	Which one combination is correct = Morphine reduces apnoeic threshold
39.	Most suitable NSAID during Lactation = Ibuprofen
40.	Local Anesthetic havingIntirnsic sympathomimet activity = Cocaine
41.	Nitrous oxide produces = Good analgesia
42.	T/t of chloroquine resistant malaria = Mefloquine
43.	Antibiotic for pseudomonas = Cipro
44.	Doesnt act via receptors = Aluminuim hydroxide
45.	Steroids drug action on cells = Act on Genes
46.	Which of the following increases lower eosophageal tone n speeds up gastricemptyingtime = Metoclopramide
47.	Patient presented in emergency, deeply comatosed, not respondingto naloxone = Phenobarbital
48.	Highest bioavailability of anti emetics = Metacloprmide
49.	Contraindication for propofol is hypersensitivity.
50.	Most common S/E of useof histamine 1 blocker = Sedation
51.	Wich Antiemetic has high bioavailability = Metoclopramide
52.	Drug causing peripheral neuropathy and pancreatitis = Diadenosine
53.	Pregnant women 1st trimester develops Atrial fibrillation what would you give = IV Heparin
54.	A pregnant full-term patient came into the ER with pre-eclampsia her Bloodpressure was190/110. She was admitted for emergency ceserean section. What is the best medicine to Lower down blood pressure = Hydralazine
55.	Class three anti arrhytmec drug = Amiodorone
56.	Patient was admitted in the ICU, he had a central venous catheter for 10 days. He started having fever. Blood cultures were sent. It came back positive for Gram positivecocci inclusters. What medication will you start = Vancomycin
57.	About Lignocaine what is true = Prevents influx of Na ions across membrane
58.	H-k- Atpase pump inhibitor is = Omeprazole.
59.	Analgesic causing tachycardia in therapeutic dose = Pethidine
60.	Following is a good analgesic but weak anaesthetic = NO
61.	Effect of drug on a body = Pharmodynamics
62.	Patient was brought to the ER unconscious. The doctor gave Naloxone but itwas notworking. What is the likely cause of toxicity = Phenobarbital
63.	All anti psychotics are alike in=anti emetic effect (5 jan 2015)

64.	Which of the following drugs is contraindicated in a patient with raised intracranial pressure = Ketamine
65.	Fio2 max dose which does not cause fetolental adrenoplasia = 0.6
66.	the blood level of wc of the following drugs is monitored usually after administration = Vancomycin
67.	Doc for Neisseria Meningitis = Penicillin G
68.	Anticoagulantion e heparin is C/Iin patients e = Thrombocytopenia
69.	Which on has highest bioavailibilty = Metoclopramide
70.	In a pt of asthma and IHD, whichdrug should b used to control bp during an operation = IV nitroglycerine
71.	Side effect of cemitidine = Inhibition of p45o
72.	Which of the folowing prolong use of drug will cause persistent inc in gastrin secretion = PPI
73.	Which of the following increases lower eosophageal tone n speeds up gastric emptying time = Metoclopramide
74.	55yr old Pt allergic to penicillin prev h/o rhematoid heart disease...get dental treatment. Prophylaxis = Vanco plus gentamycin (MRCP pass med)
75.	feature share by diazepam and chlropromazin = Sedation
76.	overdose of antidepressantcause = Tonic clonic seizures
77.	aspirin toxicity cause = Alkalosis
78.	anticoagulant arecantaindicated = Thrombocytopenia
79.	cimitidin cause = Heapatic enzyme inhibitor
80.	Angina is worsened by = Theophyline
81.	Patient has multiple sclerosis develop urinary incontinence which drugshould be given = Oxybutynin
82.	Drug which stable plaque in Acute Coronary Syndrome = Atorvastatin
83.	Adenosine = Inhibit SA andAV node
84.	Drug for MRSA = Co-trimaxazole
85.	Succinylcholine toxicity in individuals having deficiency of = Pseudocholinesteae
86.	Dobutamine action = Beta1
87.	Dm 2 + elderly = Talbutamide
88.	Mosteffective Dvt prophylaxis = Low molecular wt heparin
89.	Which drug can not cross BBB = Dopamine
90.	MAO Inhibitor and hypertensive crises = Coffee
91.	Which of following drug cause hyperuricemia = Pyrazinamide
92.	Uterine Atony occurs after delivery drug of choice = Ergometrine
93.	Histamine release = Morphine, also tramadol if there is no option of morphine.
94.	Dilation of coronary vessels is caused by = NO
95.	Which of the following drugs would you prescribe in a patient with cardiogenic shock = Dopamine
96.	Drug of choice for gas gangrene = Penicillin if not in option then click clindamycin
97.	Tachycarida is adverse affect of = Isosorbide
98.	DOC for Tourette Syndrome = Haloperidol
99.	Centrally acting antiemetics = Metochlopromide
100.	Which of thefollowing is an antifungal = Ketoconazole
101.	A 60 years old patienthaving hypertension, diabeteswith hyperthyroidism, which drug will be safe for him = Beta Blockers
102.	How much time digoxin required to reach at stable level = 9 minutes
103.	Acetozomalamide(diamox) MOA = H+ absorption, Na K exceretion
104.	A pregnant lady during 5th month of Gestation is case of thyrotoxicosis, most appropriate drug for treatment = Methiamozole ref CMDT (in 1st trimester u can give PTU after 1st its methimazole)
105.	Maximum effect produced by a drug is measure of its = Efficacy

106.	Before giving GA to a patient halothane is combined with = Nitrous Oxide
107.	Which drug has more effect on cox II than cox I = Celexocib
108.	Regarding tramadol true is = Weak meu agonist.
109.	Ketorolac analgesia most preferable = Non-diabetic cholecyctectomy
110.	A 12 years old male, havingmyoclonic seizures, what will your advice = Carbamazepine
111.	Seizures, 3 spikes per second, management = Ethosuximide
112.	Epinephrine is contraindicated for treatment of postural hypotension if patient is already taking which of the following drug = Amitryptaline
113.	Which drug if given IV in clinical dose will cause increase heart rate and pupillary dilation = Atropine
114.	Patient with family history of IHD and Breast Cancer want prophylaxis to prevent Osteoporosis, youwill advice = Raloxifene
115.	To facilitate action of atropine, TCA block which of the following receptor = Cholinergic
116.	Lady having tremors, problem in writing, family history of similar complain, what you will advice = Propranolol.
117.	Patient presented with complain of tremors, no liver disease, no kayser Fleischer ring, normal thyroid profile, no neck swelling, no palpitation, treatment = Propranolol
118.	Cause of Priapism = Trazodone
119.	Drug act on Neuromuscular Junction = Tubocurarine
120.	20 ears old, command hallucinations, apathy, drug advice = Olanzapine
121.	Patient, 40 yrs old brought by his father, complaining son has episodes of rage and mania, followedby crying and asking for forgiveness, what you will prescribe to stabilize mood = Lithium
122.	25 yrs old mother, delivered mentally challenged baby, most likely due to use of which of the following = Alcohol
123.	Drugs inducing Rapid Eye Movement sleep = No drug can do it
124.	Barbiturates = Hepatic enzyme inducer
125.	Phase 1 drug reaction = Oxidation
126.	Which drug has more effect on coxII than cox I selective more = Celexocib
127.	Gemifibrozil mechanism of action = It causes lipid hydrolysis by lipo protien lipase
128.	Patient developed uti. and now wesee that there is pseudomonas auregonisa and treatment or antibiotic to be given = Ciprofloaxcin
129.	Drug after giving orally absorbed by aquious diffusion = Ethanol
130.	Resistent to chloroquine what to give = Mefloquine
131.	Benzo...pheno and other antiepileptics act by = GABA
132.	Grade 4 hepatoencephlopathy caused by = Paracetamole
133.	Ca channel blocker given in Hypertrophic obstructive cardiomyopathy = Verapamil
134.	Selective action = Butaxalol on B1
135.	After oral antiguagulant which factor inhibited first = Factor 7
136.	LMWH and Heparin has in common = Same action on factor 10
137.	Which drug cause tachycardia in therapeutic doses = Fentanyl
138.	Drug which is strong analgesic but not a good Anesthetic = Nitrous oxide
139.	Lidocaine mechanism of action = Blocks na channels
140.	Pre-eclamptic pt, high bp medicine given before anesthesia = Hydralazine
141.	Which antiemetic is preffered in pts of chemotherapy = Odansterone
142.	Drug interaction = Both pharmacokinetic and pharmacodynamics
143.	Pronounced in penicillin anaphylaxis is = Generalized skin rashes.
144.	Dimercapol inc → Bleeding time (see the difference between dicumrol and dimercapol in previous thoery of pharma chapter of this book)
145.	Dexamethasone as compare to hydrocortisone = Hyperglycemia
146.	Vol. of distribution is not affected by = Gender
147.	Histamine releasing opioid = Morphine

148.	Morphine is used in = Terminal cancer pain
149.	Antihypertensive acting directly on SA node = Verapamil
150.	Mode of action of=cephalosporin = Inhibit transpeptidase
151.	What is used for traveller's diarrhea = Diphenoxylate
152.	Heart failure + AF = Digoxin.
153.	Pt. on ATT, can't differentiate btw red and green which drug is responsible = Ethambutol
154.	Heparin primarily works through = Anti thrombin 3
155.	Pt. with bee sting after 4 hours, he has periorbital edema, Hypotension bp 100 by 6o Pulse 120 (delayed anaphylactic reaction ban rha tha) what to give = IM adreanline
156.	What is the mediator of allergy = 5 hydroxy tryptamines
157.	4 yrs child with meningitis plus rash (meningococcal meningitis ka scenario ban rha tha) treatment = 3rd generation cephalosporines
158.	Alpha-2-agonist used in ICU for sedation = Dexmedetomidine
159.	ClavulinicAcid is use with Penicilline to = It inhibit beta lactamase
160.	Ondasentron M/A was asked = 5-HT3antagonist
161.	Edrophonium most common adverse effect = Nausea
162.	A known DmT2 man with Bp of 140/100 mmHg and glucose level of 200mg/dl, which drug you will Give = Linisopril
163.	Which drug cause Hypoglycemia most rapidly = Glibenclamide
164.	Destribution of drugs is enhanced by = Lipid solubility.
165.	Insulin is inhibited by = Beta blockers
166.	A female delivered a baby and she was started on warfarin as she developed dvt. The next day she has a purplish patch on her right thight what can be the cause = Protein C def
167.	Bupivacain first sign of over doze = Ringing in ears
168.	Antibiotic should be given = On operating table
169.	Acute beta 2 blockage causes = Vasoconstriction in smooth muscles
170.	Warfarin overdose causes brain haemorrhage immediately give = FFP
171.	Least likely cause of pseudomembranous colitis = Vancomycin.
172.	Aspirin and other NSAIDS work by acting on = Cyclo-oxygenase
173.	Drug used to treat Endometriosis = Danazole
174.	Phospholipase most likely to be inhibited by = Steroids
175.	Patient on antituberculous drugs, presents with pin and needle sensations, what drug should bestopped = Isonazid
176.	Drug of choice in actinobacter bounei = Imipenem
177.	Benzodiazepines causes = Dependence
178.	Angina worsen by which drug = Theophylline
179.	Rivastigmine = Acetylcholine estrase inhibitor
180.	Drug which when given increase effect of antiseizure drugs = Valproate
181.	Patient was given thiopentone he developed severe pain what should be the management = Lignocaine
182.	Patient underwent limb surgery now complain of moderate pain on 3rd post op day whatshould be given = Ketorolac
183.	Chlorthalidone causes = Hyperuricemia
184.	Which agent releases maximum histamine = Atracurium
185.	Patient underwent liver transplant which of the drug you will prescribe which is nephrotoxicand doesn't causes bone marrow depression = Cyclosporine
186.	Hyperthyroid lady with ventricular tachycardia heart rate of 180 pulse irregulary regular treatment of choice = Propanolol
187.	Digoxin toxicity is increased by = Increase intracellular calcium
188.	More local anesthetic concentration in the blood by = Spinal block
189.	Young girl with severe ronchi breathlessness PEFR less than 50 % of predicted management = IV steroids plus bronchodilators

190.	Patient solving airthematic problem EEG wave present = Beta
191.	Aspirin MOA = Inhibit prostaglandin production
192.	Neuroleptic malignant syndrome caused by drug = Haloperidol
193.	Thrombocytopeniacaused by = Chloramphenicol
194.	Half life depends on = Drug clearance
195.	A person developed urine infection. Urine culture plate yielded a greenish growth having
196.	Fruity smell this organism was oxidase positive and non-lactose fermenting. The most appropriate drug in this case would be = Ciproflxacine
197.	Inhalational agent which increases cerebral blood flow = Halothane
198.	Rheumatic fever and infective endocarditis treatment to prevent disease is = Pencillin G
199.	Most common cause of increase BT is = Aspirin toxicity
200.	Natural anticoagulant = Heparin (ref. ganong)
201.	Good analgesic but weak anasthetic = Nitrous oxide...5th Feb 2015
202.	Natural thrombolytic = Plasminogen
203.	Treatment of erythroblasosis foetalis = Anti – D
204.	Iron requirement for pregnant lady = 4 – 5mg
205.	Half life of dopamine = 2 minute
206.	Steady state of dopamine = 8 minutes
207.	Urea other than liver synthesized by = Brain and kidney
208.	Measure of drug safety = Therapeutic index
209.	Antidote for acetaminophen = N acetyl cysteine
210.	Antidote for opiods = Naloxone
211.	Antidote for salicylates = $NaHCO_3$
212.	Thizide causes = Trombocytopenia
213.	Atropine is closely related to = Scopalamine.
214.	Red amn syndrome = Vancomycin.
215.	Drugs given with serum concentration monitoring is = Vancomycin.
216.	DM+Pregnancy drugs given should be → Insulin.

CELL INJURY

- If the oxygen partial pressure (in the plasma) is decreased, the oxygen saturation (on Hb) MUST also decrease.
- Thrombosis in a muscular artery is the most common cause of ischemia.
- Hypoxemia (decrease oxygen partial pressure) is a cause of hypoxia
- Respiratory acidosis! CO2"! pO2# always (and vice versa).
- Hypoxemic patient that gets 100% oxygen and his pO2 didn't increase! shunt! ventilation defect (ARDS, hyaline membrane disease).
- Perfusion defect (PE)! "dead space (100% O2 will get the pO2 up)
- Diffusion defect (sarcoidosis, pulmonary edema)
- J reflex innervated by the Kent nerve, cause dyspnea (fluid in lung interstitium irritating the J receptors).
- Anemia (Hb related problem)! pO2 normal, saturation normal, Hb decreased! exertional dyspnea.
- House fire produces tissue hypoxia in 2 ways: **CO poisoning** (! **saturation!** give 100% oxygen) and CN poisoning. Both inhibit **cytochrome oxidase**.
- Cyanosis is the clinical evidence of decreased saturation. Red pigment hides the cyanosis in CO poisoning (most frequent symptom is headache).
- MetHb! saturation decreased because the Hb is Fe$ and not Fe% (chocolate color blood)! 100% oxygen doesn't improve cyanosis. Treatment is IV methylene blue, vitmamin C (also but not main)
- Sulfa and nitro drugs (oxidizing agent): 1. produce MetHb. 2. Hemolytic anemia, G6PD deficiency.
- MetHb common in HIV, because we use sulfa drugs to treat pneumocystis carinii.
- **Right shift curve**: 2,3 BPG", high altitude, acidosis, fever.

Left shift curve: CO, MetHb, HbF, 2,3BPG#, alkalosis.

- Uncoupling agents (mitochondrial membrane permeable to protons): dinitrophenol (wood preserving), alcohol, salicylates. To compensate, NADH, FAD producing systems (which produce protons) increase! hyperthermia (alcoholics are more susceptible to heatstroke).
- **Respiratory acidodis** = Hb normal, Saturation#, pO2# Anemia = Hb decrease, saturation normal, pO2 normal **CO + MetHb** = Hb normal, saturation#, pO2 normal
- Anaerobic glycolysis! lactate acidosis! denature proteins + enzymes (can't even auto digest itself)! coagulation necrosis! infarct.
- Anaerobic glycolysis! ATP pump malfunction, decrease ATP! Na enters cells!
- water follows! cellular swelling (reversible!).
- **Irreversible cell damage:** ATP decrease! Ca ATPase#! intracellular Ca"! activates nuclear enzymes (! pyknosis), phosphlipase (! cell membrane damage)! pancreatitis.
- Cell death: CK, GOT, GLT, amylase increase.
- Lipofuscin (wear and tear pigment) is a brown pigment in atrophic organs in elderly. It cannot be digested. Hemosiderin or bilirubin can also produce a brown pigment.
- Reperfusion injury (oxygen radicals) can be caused after giving TPA for coronary thrombosis, then oxygenated blood go to the injured cardiac muscle.
- IRDS: retinopathy of prematurity (oxygen radicals destroying the retina, blindness) and bronchopulmonary dysplasia (fibrosis)
- Most common cancer of radiation is Leukemia
- Iron overload cause free radicals! cirrhosis, restrictive cardiomyopathy, pancreas failure! malabsorption + diabetes.
- Acetoaminaphen (Tylenol) is the #1 cause of drug induced fulminant hepatitis (damage around **central vein**). Treatment: N-acetyl cystein ("glutathione)
- Neutralization of superoxide is by superoxide dismutase (turns into peroxide).
- PPP generates Glutathione and NADPH.
- CCL4 can also be converted to a free radial (CCL3) ! fulminant hepatitis.
- Acetoaminaphen (radicals) + Aspirin (#PG) ! kidney damage (renal medulla)
- Di-george syndrome: absence of thymus, cause tetany.
- Councilman body in Hepatitis: apoptotic eosinophilic cell with no nucleus.
- Coagulation necrosis - **Pale infarct**: Heart, kidney, spleen, liver

Hemorrhagic infarct: Bowel, testicle (torsion), lungs.

- Vegetation of acute rheumatic fever rarely embolize. Infective endocarditis does.
- Mitral stenosis can cause thrombi in left atrium ! atrial fibrillation.
- The arrhythmia most associated with systemic emboli is atrial fibrillation.
- Dry gangrene: no pus
- Most common cause of non traumatic amputation is diabetes ("ATH of popliteal artery)
- Most common cause of bowel infarction: #1: adhesions of previous surgery, #2: piece of small bowel trapped in an indirect inguinal hernia.
- Liquefactive necrosis is related to an infection where neutrophils are involved (acute inflammation, lung/brain abscess, cellulites by strep.) and also related to brain infarct.
- Granulmatose necrosis: **caseous** – mycobacteria or systemic fungal infection.

Non caseous – sarcoidosis.

- Epigastric distress with pain radiating to the back ! pancreatitis (retroperitoneal)
- **Enzymatic** fat necrosis (pancreas) or **traumatic** fat necrosis (breast, adipose) can both calcify (look like cancer on X-ray) but it's painful unlike cancer.
- Calcium bound to fatty acid = saponification (chalky white areas on X-ray).
- Bluish discoloration on histologic sections is calcium (dystrophic calcification).
- Fibrinoid necrosis (looks like fibrin but isn't): immunological diseases (rhematic fever, rheumatic arthritis, glomerulonephritis, SLE, vasculitis).
- Palpable purpura: small vessel vasculitis, hypersensitivity type 3.
- Conditions that present with palpable purpura include: Henoch-Schönlein purpura, subacute bacterial endocarditis and Rocky Mountain spotted fever.
- Immune complex! activate alternative complement system ! C5a ! chemotaxis of neutrophils that cause the actual damage.
- Yellow fever (Arbovirus) damages the liver zone 2 (mid-zone necrosis)
- Alcoholics have fasting hypoglycemia, lactic acidosis ("NADH shift pyruvate to lactate so there is no substrate for GNG), keto-acidosis (& hydroxybutyrate).
- Restriciting CH will reduce the synthesis of VLDL (Glycolysis provides glycerol 3 phosphate, which is the backbone of TAG which is incorporated into VLDL).
- Kwashiorkor: reduce protein intake ! no apo-proteins ! huge fatty liver Reduce protein intake ! no oncotic pressure ! Ascites.
- Ferritin (soluble iron storage) is a marker for diagnosing iron deficiency anemia or hemosiderosis, hemochromatosis.
- Hemosiderin (insoluble iron storage), stored in MP and BM. Stained with Prussian blue.
- **Dystrophic** calcification: **damaged** tissue gets calcified (fat necrosis, ATH, aortic stenosis, hemolytic anemia), normal serum calcium.

Metastatic calcification: hypercalcemia or hyperphosphatemia! calcium deposits in **normal** tissue.

- Congenital bicuspid aortic valve is the most common cause of aortic stenosis.
- Spectrin is needed to keep a bi-concave disc, if it's defective! spherocytosis.
- **Ubiquination** - Mallory bodies = alcoholic hepatitis
- Neurofibrillaty tangles (tau protein) = Alzheimer, Creutzfeldt-Jakov disease. Lewy body = Parkinson (substantia nigra, dopamine)
- Labile cells = division is via stem cells (BM, skin, intestinal crypts), in cell cycle. Cell cycle specific or non specific drugs ! BM suppression, diarrhea, rash.
- Stable cells = mostly in G0, but can be stimulated to divide (liver, spleen, kidney, smooth muscle, endometrium)
- Permanent cells = can't get into the cell cycle (striated and cardiac muscles, neurons),
- **can** go through hypertrophy.
- Hyperplasia = increase in number, hypertrophy = increase in size.
- The length of the cell cycle is decided by the length of the G1 stage.
- Glucagon is a phosphorylator, insulin is a **de**phosphorylator.
- **Rb** (chr.13) prevents the cell from going into S phase. When phosphorylated by **CDK**, it's inactive.
- **p53** (chr.19) induces a CDK inhibitor, gives time to detect & correct defects before entry to S phase.
- HPV E6 suppresses p53, HPV E8 suppresses Rb.
- No Rb protein! Retinoblastoma, osteogenic sarcoma, breast cancer.

- Codman's triangle seen in: osteosarcoma, Ewing sarcoma, subperiosteal abscess.
- Vinca Alkaloids (periwinkle plant), Paclitaxel (chemotherapy, yew tree), Colchicine, Griseofulvin! **M phase** Etoposide! **G2 phase** MTX, Bleomycin! **S phase**
- MTX, used in rheumatoid arthritis, inhibits DHF reductase! can cause macrocytic anemia.
- Atrophy = decrease in tissue mass, decrease cell size, less mitochondria.
- Hydronephrosis is mostly caused by renal stones! increase pressure! Ischemia! atrophy of renal tubules.
- ATH, Alzheimer (& amyloid protein, layers 3,5,6 destroyed), ALS! brain atrophy, neuron degeneration.
- Hypopituitarism ! adrenal gland atrophy (zona reticularis and fasiculata ONLY)
- Oral thyroid ! thyroid atrophy.
- CF (Chr.7) ! block lumen ! pancreas atrophy
- Renal vascular hypertension ! kidney atrophy, other kidney hypertrophy ("renin)
- If you block G2 phase, you have **4n** chromosomes (no mitosis)
- Hyperplasia left unchecked is predisposing for cancer (EXCEPT prostate)
- Unopposed estrogen (no progesterone) causes endometrial hyperplasia ! atypical hyperplasia ! cancer.
- Gravid uterus (after delivery): 50% hypertrophy, 50% hyperplasia.
- RBC hyperplasia in BM may be caused by COPD
- Erythropoetin is made in the endothelial cells of the peri-tubular capillary.
- Psoriasis is an unregulated proliferation of squamus cells in the skin (hyperplasia). Treatment: MTX (works on the basal cells).
- All hormone stimulated glands go through hyperplasia, **not** hypertrophy.
- Urinary bladder goes through hypertrophy of smooth muscle cells related to afterload caused by urethra narrowing.
- H. Pylori is the most common cause of adenocarcinoma of the stomach.
- Clonorchis Sinensis (Chinese liver fluke) is associated with cholangiocarcinoma Schistosome Haematubium causes squamus metaplasia (instead of transitional) in the urinary bladder ! SCC.
- Dysplasia = atypical hyperplasia, precursor for cancer.
- Actinic (solar) keratosis is premalignant to SCC of the skin, related to chronic sun exposure and excess keratin. If scraped off, it grows back.
- No premalignant lesion to basal cell carcinoma. It is more common.

Inflammation:

- Histamine is responsible for the rubor, calor (both: vasodilatation on arterial end) and tumor ("permeability on venular end) of acute inflammation.
- Bradykanin (degraded by ACE) and PGE2 are responsible for the dolor.
- C5A, LTB4 ! chemotaxis, make adhesion molecules.
- IgG, C3B ! opsonization
- C3A, C5A ! anaphylatoxins (stimulate mast cells to release histamine)
- I-cell disease (lysosomal storage disease): can't add mannose 6 phosphate residues to lysosomal enzymes ! no proper trafficking ! empty lysosomes.
- Oxygen dependant myeloperoxidase system: O2 is converted by **NADPH oxidase** in cell membrane of neutrophils + monocyes (not MP) into superoxide (free radical), that gives off energy ! oxygen burst – can be measured by radiation detector or NBT dye test: if working ok ! bluish color, if not ! chronic granulomatous disease of childhood (X-linked, no NADPH oxidase).
- Superoxide is converted to peroxide which together with chloride (catalyzed by myeloperoxidase) to form bleach (kills bacteria).
- Microglial cells are the MP of the CNS.
- Dendritic cells (MP outside CNS) are located in lymph nodes.
- Catalase (Staph. Aureus) breaks down peroxide and prevent its utilization in CGD. Strep doesn't have catalase, so it can be killed even in CGD patient.
- In Myeloperoxide deficiency (AR), there is a respiratory burst, but no bleach.
- Adhesion/& integrin defect ! impaired adhesion, phagocytosis ! umbilical cord doesn't fall off (removed surgically), no neutrophils lining the small vessels.
- NO is used in treatment of pulmonaty hypertension, big role in septic shock.

- IL-1 ! stimulate hypothalamus to produce PG ! fever (reduced by aspirin).
- Corticosteroids **inhibit PLA2** ! no release of retinoic acid from PL ! no PG, IL. **Decrease adhesion molecules** (along with epi and NE) ! **neutrophil** count **increase** (more circulating instead of being stuck to endothelium). **Lymphocytotoxic** by apoptosis. Decrease eosinophils.
- Addison's disease ! #neutrophils, "eosinphils. MI !"epi! "neutrophil
- Omega 3 (like aspirin) inhibits platelet aggregation.
- Zileuton inhibits 5 lipoxygenase, works in asthma.
- TXA2 made in platelets ! vasoconstrictor, bronchoconstrictor, platelet aggregation. PGI2 made in endothelial cells ! vasodilator, inhibits platelet aggregation.
- PGE2 ! vasodilator in kidney, patent ductus arteriosus, mucus barrier in stomach, dismenorrhea, increases uterine contractility.
- Dipyridamole inhibits TX synthase, used in stress test in coronary artery disease.
- Alveolar MP have a lot of lysosomes which are seen as black dots on EM.
- Lamellar bodies (where lechitin is located) are seen in pneumocyte type 2.
- Vitamin E neutralizes oxidized LDL
- 60% of lymphocytes are T. Th:Tc ratio is 2:1.
- Plasma cell has a lot of ribosomes, because of Ig production. It is located in germinal follicle.
- Eosinophils have crystals in their cytoplasm. In asthma, degenerating eosinophils form Charcot-Leyden crystals seen in sputum.
- Major basic proteins are released by eosinphils in type 2 H-S to kill helminths.
- Mast cells release histamine and eosinophil chemotactic factor in type 1 H-S. Eosinophils here release histaminase and leukotriene neutralizing agents.
- CD3 = marker in antigen recognition site for all T cells CD1 = antigen marker for histiocyte CD10 = CALLA antigen (common ALL antigen) CD15, 30 = Reed Sternberg CD21 = B cell, EBV hooks on it CD45 = all leukocytes
- Antipyretics reduce the oxygen in neutrophils (disturbs O2 dep. myelo system)
- Fever is not good for viral and bacterial reproduction.
- Pus coming out of lactiferous duct in post partum ! Staph. Aureus.
- Osteomyelitis (yellowish abscess) ! Staph. Aureus. In Sickle cell anemia, it is usually cause by Salmonella Typhimurium. Hematogenous spread.
- Cellulitis ! Strep. Pyogens
- C. dyphteria **toxin** damages the sub/mucosa ! psedomembrane (like C. difficile)
- Bread and butter pericarditis = fibrinous inflammation ! SLE, MI, coxsackie
- Dressler's syndrome: pericarditis which develops about 6 weeks after an MI or heart surgery.
- Most common organism causing infection in 3rd degree burns is Pseudomonas Aeruginosa. Pus color is green due to pyocyanin.
- Fibronectin is an adhesion molecule and fibroblast chemotactic in healing process. Granulation tissue starts at day 3, peak on day 5.
- Type 4 collagen in basement membrane.
- Type 1 collagen is in bone, skin, tendons and ligaments
- Type 3 collagen is in the initial stages of wound repair. Broken by type 3 collagenase. Metalloenzyme (need zinc) helps turn type 3 into type 1.
- Maximal tensile strength in a wound by 3 months is 80%.
- Most common cause of poor wound healing is infection.
- Ehlers danlos syndrome: defect in collagen.
- Marfan syndrome: defect in fibrillin.
- Scurvy: defect in hydroxylation of proline and lysine ! no cross bridges ! weak abnormal collagen ! hemorrhage, no wound healing, hemoarthrosis.
- Keloid (hypertrophied scar) = excess of type 3 collagen deposition.
- SCC is common in the setting of scars related to 3rd degree burns or chronically draining sinus tracts (in osteomyelitis).
- IgM is the most potent activator of the complement system, because it had 10 antigen recognition sites. Main Ig of Acute inflammation.
- IgG complement activation doesn't go beyond C3 (no C5A and so on). Main Ig of chronic inflammation.

- Pus is not a characteristic of chronic (only of acute) inflammation.
- Granuloma: roundish and pink, multi nucleated giant cells. Type 4 H-S. Sometimes gets calcified. Epitheloid cells are activated MP, when they die they form multinucleated giant cells which are seen in granulomas.
- Tc killing neoplastic cells or virally infected cells is also Type 4 H-S.
- MP and Th are the key cells of TB.
- Th **type 1** are involved in type 4 H-S. MP release IL-12 ! memory T cells.
- Langerhans cells are the MP of the skin, phagocytose PPD, process it and present it to Th type 1 that has memory of previous exposure ! release cytokines that produces the inflammatory reaction which is part of the positive PPD.
- HIV: less/no type 4 H-S (Th##), no granuloma formation in HIV. PPD of 5 cm is enough to say positive in HIV.
- Scar tissue: heart muscle, kidney (especially straight portion of PT, TAL).
- Na-K-Cl pump generates free water (80ml for those 4 ions). Blocked by lasix.
- Type 2 pneumocytes: 1. produce surfactant, 2. repair cells, even replace type 1.
- Astrocytes: can proliferate, cause gliosis (reaction to injury in the brain)
- Schwann cells myelinate PNS axons, Oligodendrocytes myelinate CNS axons.
- Schwannoma = acoustic neuroma (if involves VIII nerve), seen in neurofibromatosis.
- IgG and/or fibrinogen" ! ESR"
- IgM, cryoglobulin cause RBC to stick (cold agglutination! Raynaud's phenomenon). High association of **Hep.C** with cryoglobulin.
- IgG ! MM, IgM ! macroglobulinemia (both increase ESR)
- Greater than 10% band neutrophils is left shift.
- Acute inflammation: absolute increase in neutrophils, toxic granulation, left shift.

Fluid and hemodynamics:

- **Non pitting edema**: exudate (increase vessel permeability with pus) > 3g **Pitting edema**: transudate (right heart failure) < 3g Lymphatic fluid: initially pitting, later not
- Low albumin: nephrotic syndrome, malabsorption, cirrhosis, # protein intake.
- **Kerley B lines**: usually indicative of interstitial pulmonary edema (CHF), clinically present as dyspnea.
- **Kerley A lines**: caused by distension of anastomotic channels between peripheral and central lymphatics of the lungs (less frequent than B)
- Cirrhosis ! #oncotic prssure (#albumin synthesis) + "hydrostatic pressure (portal hypertension) ! ascites.
- Pitting edema in the legs can be caused by #oncotic pressure (cirrhosis) or "hydrostatic pressure (RHF).
- Lymphedema: post radical mastectomy (#1), Wuchereria Bancrofti, inflammatory carcinoma of the breast, lymphogranuloma venereum (Chlamydia Trachomatis). lymphangio**sarcoma** is a complication of chronic lymphedema.
- Osmolality is mainly determined by Na (doubled, one for Cl), glucose and BUN.
- Diffusion: high ! low, osmosis: low ! high.
- **Hyponatremia**! osmosis (ICF)! brain edema! mental status abnormality
- **Hypernatremia** ! osmosis (ECF) ! brain contract ! mental status abnormality
- Glucose is an EC molecule (the IC one is phosphosylated).
- Hyperglycemia ! osmosis from ICF to ECF ! [Na] # (dilutional hyponatremia)
- Urea is permeable so it can go through the compartments to establish equilibrium.
- Isotonic **loss** of fluid (EC loss, no osmotic gradient): hemorrhage, adult diarrhea. Isotonic **gain** of fluid (EC gain, no osmotic gradient): isotonic saline.
- Hypertonic **loss** of fluid (ECF ! ICF because of hyponatremia): diuretics. Hypotonic **loss** of fluid: sweat, baby diarrhea (you give back hypotonic solution). Hypotonic **gain** of fluid (ECF+ICF expanded): SIADH (treatment: restrict water).
- **Serum Na < 120mmol always siadh** (at least on boards…)
- 1st generation oral sulphonylureas (chlorpropamide; insulin secretagogues for DM-II): SIADH as a side effect in 30% of cases.
- Pitting edema (RHF, cirrhosis): gain of both Na and water (but more water). Treatment will be both Na and

water restriction, diuretics.

- Glucose or Mannitol in urine ! hypertonic loss in the urine.
- Glucose has to be in the solution with Na, because of the gut Na-Glc transporter.
- Normal saline (0.9%) is plasma without the proteins, it stays in the ECF.
- CO# ! renal blood flow# ! peritubular hydrostatic pressure# ! peritubular oncotic pressure" ! reabsorption" (isotonic solution).
- Dry tongue (dehydration) ! hyponatremia, skin indentations ! hypernatremia Normal skin turgor ! normal Na concentrations (except in elderly)
- Diabetes Insipidus CANNOT produce shock (only water loss from ICF, NOT hypovolemic). No dehydration signs (no salt loss). Treatment: 5% dextrose+water
- Tilt test: **Lying down** (no effective gravity) ! **normal BP + pulse**, **Sat up** (imposing gravity) ! **BP!, pulse#** (catecholamine release from BP#) ! sign of volume depletion. Treatment: normal saline (0.45% saline **after** BP stable)
- DKA ! hypovolemia ! give normal saline (around 6-8 liters until BP stable).
- **After BP stabilization, you give what you lose!!** (hypo ! hypo, iso ! iso…)
- Loss of salt ! Hypovolemic shock (CO#, **cold** skin, TPR", MVOC#, BP#, pulse", LVEDP#) MI ! cardiogenic shock (everything like hypovolemic **except** LVEDP") E. coli (urinary catheter) ! septic shock (CO", **warm** skin, TPR#, MVOC")
- Poiseuille law: Q = ' (Pi-Po) **(r$)$** / 8%L => **TPR** (diastolic BP) **= % / (r$)$**
- Endotoxins ! **activate complement** ! C3a, C5a (anaphylatoxins) ! mast cells ! histamine ! vasodilation of arterioles. Endotoxins ! **damage endothelieal cells** ! NO, PGI2 release ! vasodilation.
- Mixed venous oxygen content can be measured in the right atrium and it is the best test for tissue hypoxia. It is **high** in septic shock (lots of blood but oxygen cannot be extracted because blood is going to fast), **Low** in hypovolemic shock.
- Kidney medulla suffers the most from shock (BUN + creatinin" ! sugar" ! ATN ! renal tubular casts blocks urine ! oliguria). Treatment: "RBF.
- Sickle cell **trait** can cause micro infarction in kidney medulla ! micro hematuria.
- Chronic respiratory alkalosis in high altitude is the **only** case where pH goes **completely** back to normal.
- Barbiturates, CNS injury ! damages resp. center in medulla ! resp. acidosis.
- Anxiety, pregnancy ! respiratory alkalosis ! tetany (ionized Ca#) – signs: Tourseau sign (compression of the forearm produces spasm in the hand and wrist) Chvostek's sign (contraction of the muscles of the eye, mouth or nose, elicited by tapping along the course of the facial nerve).
- Estrogen and progesterone over stimulate the respiratory system, cause spider angioma on the skin (normal in pregnancy) and AV fistula in the lung.
- Endotoxins, Salicylate ! **respiratory alkalosis**+**metabolic acidosis**. Normal pH.
- **6 year** child with inspiratory stridor ! acute epiglotitis (H. influenza) **3 month** baby with inspiratory stridor ! croup (parainfluenza virus): tracheal obstruction, stipple sign on X-ray.
- ALS, Guillain-Barr, Polio ! paralysis of inspiration muscles ! resp. acidosis.
- COPD ! resp. acidosis. Restrictive lung disease ! resp. alkalosis.
- High altitude: atmospheric pressure decrease ! pCO2" ! pO2# ! hyperventilation ! pCO2# ! resp alkalosis.
- Caisson's disease = the bends = decompression sickness: Headache, pain in the arms, legs, joints, and epigastrium, itching of the skin, vertigo, dyspnea, coughing, choking, vomiting, weakness and sometimes paralysis, and severe peripheral circulatory collapse.

Nutrition:

- Anorexia nervosa: #GnRh, #FSH, #LH, #estrogen, amenorrhea, osteoporosis. Usually die of cardiac disease, HF.
- First step of treatment for DM-II and hypertension is diet!
- Bulimia nervosa: **teeth erosion** of enamel ! dentin showing (brown)

Metabolic alkalosis ! resp. acidosis as compensation ! hypoxia ! PVC !VF.

Mallory-Weis syndrome (tear in the cardia)
Boerhaave syndrome (rupture) ! air and fluid in the pleural cavity, mediastinal emphysema.

- BMI: Kg / (height in meters) % => Obesity > 30, morbid obesity > 40.
- Obesity: main complication is HT ! LVH ! HF (most common cause of death). Other complications: 1. Gall bladder diseases. 2. "adipose ! aromatase ! "estrogen ! endometrial adenocarcinoma, breast cancer, colon cancer.
- Marasmus: total calorie deprivation, muscle wasting, **good survival chance**.
- Kwashiorkor: normal calorie intake, protein deprivation, anemia, cellular immunity problems, edema, ascites, fatty liver, dermatitis, **more likely to die**.
- Lipid soluble vit. have greater chance of toxicity (water soluble can be peed out).
- Water soluble vit. are all co-factors of biochemical reactions.
- Vit. A: Bone and muscle growth, prevents squamus metaplasia.
- Vit. A deficiency: FTT, follicular hyperkeratosis, night blindness, white spots, corneomalacia, squamus metaplasia ! bronchogenic carcinoma.
- Vit A toxicity (bear hunters): liver toxicity, cerebral edema ! headache.
- Blindness: DM, trachoma, vit. A def.
- Vit D: mostly from sunlight, not food (hardly in breast milk).
- PTH is responsible for the synthesis of 1- (hydroxylase, which is in the PT.
- ACE is synthesized in endothelial cells and pulmonary capillaries.
- Erythropoietin is synthesized in endothelial cells and peritubular capillaries.
- Hypercalcemia is a potential side effect of thiazide (used in stones).
- Only calcitonin has a receptor on osteoclasts.

PTH receptor is on osteoblasts ! release IL-1 (osteoclast activating factor) ! break down bone and increase serum Ca.
Estrogen + testosterone puts an inhibitory effect on IL-1 release. Lack of estrogen ! osteoporosis.
Vit D mineralizes bone and cartilage ("absorption of both P + Ca)
Lack of sunshine, poor diet, liver disease, renal disease (DM) ! Vit. D deficiency: **Children:** Rickets - craniotabes (soft skull), rachitic rosary (excess osteoids in costochondral junctions), rest like in adult.
Type 1: 1-(-hydroxylase deficiency, Type 2: missing the Vit D receptor.
Adults: osteomalacia - soft bones, pathologic fractures. Vit D toxicity: hypercalcemia ! stones.
Oral Vit D still has to go through the steps of hydroxylation to work.

- (hydroxy-vit D is a prescription drug (can be dangerous).

- Phenetoin, alcohol, barbiturate, rifampin ! **induce CYP450** ! sER hyperplasia:
- ! metabolize drugs and other things like 25-(-hydroxy-vit D ! #Vit D.
- ! metabolize of estrogen and progesterone in OC ! not significant enough levels to prevent pregnancy.
  - !)GT"
- Vit E: **prevent lipid peroxidation** of cell membrane (protect from PLA).
- **Neutralize oxidized LDL** (also Vit C).
- Vit E deficiency is mostly seen in CF because of malabsorption, which will cause the deficiency of all DEKA vitamins. Cause: Hemolytic anemia, neurological diseases (posterior column disease, spinal cerebellar diseases, related to myelin).
- Vit E toxicity: prevent the synthesis of the Vit K dependent coagulation factor:
- 2, 7, 9, 10, C, S ! synergistic with warfarin (after MI) ! INR" ! anticoagulant.
- Vit K: mostly from colonic anaerobe bacteria, less from food (danger in day 3-5 of newborn, between the end of the mother's contribution and the beginning of bacteria growth in colon ! can lead to hemorrhage).
- Bacteria make inactive Vit K (K2), converted to K1 by epoxide reductase (inhibited by warfarin). Function:)-carboxylation of Vit K dependant factors
- ! activates them ! allows Ca to bound ! help formation of the clot.
- Broad spectrum antibiotics (most common cause in hospital), poor diet, newborn, malabsorption ! Vit K deficieny: hemorrhagic diathesis ! bleed to brain, skin.
- Treatment of rat poisoning (=warfarin) is intramuscular Vit K.

- Vit C deficiency (scurvy): blood vessel unstable ! gums bleed, hemoarthrosis (related also to Hemophilia A), ring hemorrhage around hair follicles, pig tail hair, glossitis (smooth tongue).
- Vit C toxicity: renal stones (mainly uric acid).
- Vit C is used as a treatment for MetHb (reducing agent)
- Vit C is a co-factor in making NE from dopamine (def. in pheochromocytoma).
- Thiamin (B1): co-factor of transketolase in PPP, pyruvate DHG (to acetyl CoA, which together with oxaloacetate, givers citrate, part of TCA cycle), (-keto-glutarate DHG, (- keto-acid DHG.
- Thiamin is mostly deficient in alcoholics, main problem is ATP depletion:

Dry Beri Beri: peripheral neuropathy (ATP is needed for myelination) ! foot drop (peroneal nerve palsy), wrist drop (radial nerve), clawed hand (ulnar nerve).

Wernicke encephalopathy: confusion, ataxia, nystagmus, eye weakness. Korsakoff psychosis: can't remember new and old things.

Wet beri beri: left + right HF, congestive cardiomyopathy ! pitting edema, pulmonary edema.

- Intravenous thiamin can sometimes reverse this entirely
- Glc treatment in the hospital can drive a subclinical thiamin deficiency into acute Wernicke encephalopathy, because: glc ! pyruvate ! acetyl CoA needs thiamin.
- Comatose/semi-comatose patient, give: glc, nalaxone (for overdose), thiamin.
- Niacin (B3): co-factor for NAD, NADP reaction.
- Niacin deficiency (pellagra): dermatitis (hyper-pigmentaion in sun exposed areas, Casal's necklace around the neck), dementia, diarrhea.
- Tryptophan can be used to make serotonin and niacin (not main source)
- Least expensive lipid lowering drug is nicotinic acid, used in familial combined hyperlipidemia. Side effect is flushing (aspirin makes it disappear).
- Riboflavin (B2): co-factor of FAD, FMN reaction, glutathione reductase.
- Pyridoxine (B6): co-factor of ALA synthase (first enzyme of heme synthesis), transaminase reactions: alanin ! pyruvate (ALT), aspartate ! oxaloacetate (AST), neurotransmitter synthesis.
- Pyridoxine deficiency: mainly caused by **isoniazid**. Causes convulsions, neurological
- problems, hemolytic (sideroblastic) anemia.
- Biotin: co-factor of pyruvate carboxylase (to form oxaloacetate). Biotin deficiency: baldness, rash, hypoglycemia, lactate acidosis.
- Chromium: glucose tolerance factor (helps glucose do its job), good for DM-II.
- Copper: co-factor of lysil oxidase (cross bridges of collagen fibers, elastic tissue), Copper deficiency: dissecting aortic aneurysm (weak collagen and elastic tissue). Also, a co-factor of cytochrome aa3 amd tyrosinase.
- Fluoride: prevent dental carries.
- Flouride toxicity: white chalky teeth, calcification of ligaments that go into bone, subject to rupture.
- Selenium: co-factor of glutathione peroxidase (anti-oxidant, given with Vit E).
- Zinc: co-factor of metaloprotease like collagenase (type 3 ! 1).
- Zinc deficiency: taste and smell deficiency, rash on face, poor wound healing. Diabetics are all zinc deficient (except those who take supplements).
- Fiber (oat meal) can **lower cholesterol** (mostly soluble fiber)

Suck up water into it and whatever is inside like **lipocholic acid** (carcinogenic !
colon cancer)
give stool more often
eliminates estrogen which is recycled and not necessarily needed ! decrease risk of breast, ovarian and uterine cancer.

Protein restriction in renal failure ("urea) and cirrhosis (no urea cycle):

Most ammonia comes from bacteria that have urease that breaks urea ! hepatic encephalopathy ! mental status abnormalities, asterixis (jerking movements).

Octopamine, amino benzoic acid, false neurotransmitters also cause those.

Neoplasm:

- Invasive mole is benign tumor that can metastasize to the lung and go away.
- Basal cell carcinoma is a benign tumor that can invade but not metastasize.
- Most common benign tumor in women is in the uterus (leiomyoma). There is **no transformation** to leiomyosarcoma
- Most common benign tumor in men is lipoma.
- Tubular adenoma (strawberry on a stick) is precursor to colon cancer.
- Melanocytes: **Malignant -** melanoma, first line of treatment is excision, most rapidly growing tumor in the US. **Benign** - nevus.
- S-100 antigen stains APUD tumors (melanoma, small cc, carcinoid, neuroblastoma in adrenal medulla), neurosecretory granules on EM.
- Embryonal rhabdomyosarcoma (vaginal, penis) - desmin positive.
- **Mixed tumor**, most common salivary gland (parotid) tumor, mostly benign. From same cell layer, **unlike teratoma** derived from all 3 cell layers (teeth, bone, hair).
- Sudden onset of RLQ pain: Cystic teratoma of the ovary (calcification in pelvic area on X-ray due to teeth, bone), appendicitis, Crohn's disease, ectopic pregnancy, follicular cyst.
- Teratoma (AKA germ cell tumor) have a tendency to stay in the midline.
- Auer rod (myeloblast) ! leukemia (can metastasize out of BM, HSM) Hypersegmented neutrophil ! B12/folate deficiency.
- **Leukemia** originate from BM (can metastasize out, to lymph nodes ! generalized lymphadenopathy, hepatosplenomegaly).
- Malignant **lymphoma** originate from lymph nodes (can metastasize out, to BM)
- Most common sites of a lymphoma developing outside lymph node are: #1: stomach (related to H. pylori), #2: Peyer's patches (terminal ileum).
- Most common lymphoma: follicular B cell lymphoma (apoptosis inactivation).
- Trophoblastic tumors seen in pregnancy. In men they are non-gestational. Hydatidiform mole appear in first trimester with signs of pre-eclampsia (HT, proteinurea, edema), looks like a bunch of grapes. Uterus too large for gestational age in US.

Complete mole has the highest tendency of becoming choriocarcinoma.

- Umbilical vein is the vessel with the highest oxygenation in the fetus.
- Syncytiotrophoblast produce &-hCG, hPL
- Choriocarcinoma metastasize to the lung, respond very well to chemotherapy.
- Non neoplastic: **Hemartoma** is an over growth of tissue normally present in that area (bronchial hemartoma, PJS, hypertrophied polyp).

Choristoma = Heterotopic rest: Meckel's diverticulum (gastric mucosa in the small bowel), benign pancreatic tissue in stomach.

- Atypical mitotic spindle (and **not** increased mitotic rate) is the cause of cancer.
- 30 doubling times (cell cycles): clinically detectible tumor (1cm)
- Malignancy: lack adhesion, anaerobic metabolism, protease, collagenase.
- **Carcinoma** usually spread to lymph nodes first (but later through them to blood). **Exceptions** (hematogeous spread): follicular carcinoma of thyroid, renal adenocarcinoma, HCC.

Sarcoma usually spread hematogenously (usually does not go to lymph node).

- Subcapsular sinus of a lymph node is the part that gets replaced by tumors.
- Pouch of Douglas: unclotted blood, ruptured ectopic pregnancy, endometrial implants (endometriosis), seeding of ovarian cancer.
- Seeding: ovarian carcinoma to omentum, peripheraly located lung cancer to pleural cavity, glioblastoma multiforme & medulloblastoma to spinal fluid & cord.
- In most cases, metastases is the most common cancer of an organ.

Exception: renal adenocarcinoma.

Most common cancer of lung and bone (vertebral column, head of femur) is breast metastasis.
Most common cancer of liver, brain and adrenal gland is lung metastases. 2nd most common cancer of liver is colon metastases.
Most common metastases of testicular cancer (e.g. seminoma) is the para-aortic lymph nodes (and not inguinal, since the testes are originated in the abdomen) Most common metastases of left supra-clavicular node (Virchow's) is the stomach.

- MM is osteolytic (plasma cells release IL-1), can cause hypercalcemia.
- Prostate cancer is osteoblastic (lumbar vertebrae), release ALP. Do a rectal exam because prostate is palpable in stage 4.
- X-ray: lucency is seen in osteolytic, entities are seen in osteoblastic.
- Multiple (growth) lesions are always metastases (at least in the borads…)
- Most carcinoma have carotene in them.
- Histiocytosis X, Letterer-Siwe disease, Hand-Schuller-Christian disease: CD-1, Birbeck granules under EM
- Oncogenesis: initiation – mutation, promotion – multiple copies of that mutation, progression – different cancer cells have different function (invasion, resistance).

SIS - growth factor.
erb-2 (breast), ret (MEN1,2) - receptors.
ras, abl - messengers (phosphorylation, tyrosine kinase).
n-myc (neuroblastoma), c-myc (burkitt's lymphoma) - transcription factors.
Mechanism of mutation: **point mutations** - p-53, ras (all suppressor genes)
Amplification (multiple copies) - erb-2
Translocation (irreversible) - t(9,22) in CML (Philadelphia chr.), t(8,14) in Burkitt's lymphoma (EBV related, CD-21 ! turns B-cells into plasma cells), t(14,18) in B-cell lymphoma, t(15, 17) in acute promyelocytic leukemia (AML-3, can be treated with retinoic acid ! matures the blasts).

- Suppressor genes knock out: FAP, neurofibromatosis, Wilm's tumor, BRCA-1,2 (chr.13, chr.17 respectively).
- BRCA 2 is only related to breast cancer, BRCA 1 also to ovarian and others.
- Most breast cancers are NOT genetic (only 15% are).
- Initiators: chemical (smoking), viruses, radiation. Chemical are 80%.
- **Smoking related cancers**: 1° reason – lung, mouth, larynx, pancreas, bladder 2° reason - cervical, colon, leukemia.
- **Viral related cancers**: Kaposi sarcoma - HHV-8. HCC - HBV, HCV, aflatoxin (Asia).

1° CNS lymphoma - HIV.
nasopharyngeal carcinoma (China), burkitt's &other malignant lymphomas - EBV. SCC of vagina, cervix, vulva, anus (in homosexuals) - HPV.

- **Radiation related cancers**: CML (and other leukemia), metastatic papillary carcinoma of the thyroid, osteogenic sarcoma, basal cell carcinoma (**non-ionizing** from UVB, also causes SCC and melanoma), actinic keratosis (**sun**, pearly-gray).
- Transitional cell carcinoma carcinogens: smoking, aniline dye, cyclophosphamide.
- **Arsenic related cancers**: SCC of the skin, angiosarcoma of the liver, lung cancer. Arsenic is abundant in Bangladesh.
- Wide eye reflex: #1: congenital cataract (CMV, rubella, corticosteroids) #2: Rb.
- **Genetic related cancers**: xeroderma pigmentosum (DNA repair enzymes) - predispose to ALL, skin cancers.
- **Chromosome instability syndromes**: Wiskott-Aldrich syndrome, Bloom syndrome, ataxia telangiectasia, Fanconi's ayndrome.
- In most cases: Upper lip - basal cell carcinoma, lower lip - SCC.
- Constant irritation is a risk factor for SCC of the skin. Scars in the lung are usually related to adenocarcinoma.
- H. pylori is a risk factor for gastric adenocarcinoma and low grade malignant lymphoma.
- Keratin pearls are an histological picture of SCC.
- Tumor > 2cm, generally has a chance of metastasize.
- Significance in prognosis: M > N > T.
- Tc cells are the most important host defense system (also MP, NK, Ab).
- Cachexia is caused by TNF (catabolic state, irreversible)

- The most common cause of anemia in malignancy is anemia of chronic disease. Other reasons: right sided colon cancer bleed (iron def.), bone metastases that penetrates BM, chemotherapy drugs, autoimmune mechanisms.
- Most patients with disseminated cancer are thrombocytosis, hyper-coagulable. Trousseau sign (superficial migratory thrombophlebitis) in carcinoma of the head of the pancreas.
- Most common cause of **fever and death** in malignancy is gram negative infection.
- Most common **para-neoplastic syndrome** is hypercalcemia because of a PTH producing cancer like renal or bronchial carcinoma. Another reason for hypercalcemia could be bone metastases (NOT para-neoplastic).
- Acanthosis nigricans: marker for gastric adeno cc, insulin receptor def., MEN. Leser-Trélat sign (eruption of multiple seborrheic keratosis over night) is another marker for gastric adenocarcinoma.
- Hypertrophic osteoarthropathy produces clubbing which can be seen in lung cancer, bronchiectasis, IBD.
- Dermatomyositis (elevated serum CK, raccoon eyes, Gottron's patches over the knuckles) is related to leukemia, lymphoma and lung cancer.
- Marantic endocarditis: vegetation over mitral valve in mucus producing cancer like colon cancer which can embolize.
- Small cell carcinoma (APUD, S-100 antigen), produce ADH, ACTH and can cause hyponatremia and cushing syndrome.
- Renal adenocarcinoma can produce PTH-like hormone, erythropoietin and can cause hypercalcemia and/or 2° polycythemia.
- HCC produces insulin-like factor, erythropoietin and can cause hypoglycemia and/or 2° polycythemia.
- Medullary carcinoma of the thyroid, produces calcitonin (tumor marker that can be converted to amyloid) and can cause hypocalcemia and/or cushing's syndrome.
- **Tumor markers:** (FP - **increased** in: testicular cancer (yolk sac = endodermal sinus tumor, also hCG"), HCC, neural tube defect (give mom folate in pregnancy to prevent). **decreased** in: down syndrome.
- Bence-Jones protein (light chain, monoclonal spike) - MM
- PSA - prostate cancer and hyperplasia (sensitive, not specific). Not effected by rectal exam, unlike prostatic acid phosphatase.
- CA-125: ovarian cancer.
- CEA: colon cancer, breast cancer, small cell. CEA-anti CEA immune complex can be deposited in the kidney and cause nephritic syndrome (diffuse membranous glumerolunephritis) &-hCG: trophoblastic tumor or a mole.
- Most common primary **tumor** of the brain is cerebellar cystic astrocytoma.
- Most common primary **cancer** of the brain is meningioblastoma (also cerebellar).
- **Childhood tumors**: #1: ALL (and other leukemia), #2: CNS tumors,
- #3: neuroblastoma (adrenal medulla), burkitt's lymphoma, Ewing sarcoma (onion skin calcification, t(11,22), small blue cells), embryonal rhabdomyosarcoma.
- Cancer **incidence**: **women** - #1: breast, #2: lung, #3: colon
- **men** - #1: prostate, #2: lung, #3: colon.
- Cancer **death**: **women** - #1: lung, #2: breast, #3: colon.
- **Men** - #1: lung, #2: prostate, #3: colon.
- 2nd most common cancer incidence & death in men and women combined is colon.
- Most common **GYN** cancers are: #1: endometrial. #2: ovarian, #3: cervical.
- Most common **GYN** cancer **killers** are: #1: ovarian. #2: cervical, #3: endometrial.
- Only known tumor vaccine is HBV vaccine (HBV is the most common infection transmitted by accidental needle stick in hospital).

Hematology:

- Microcytic anemia (**MCV < 80**): iron deficiency, chronic disease, thalassemia, sideroblastic anemia.
- Macrocytic anemia (**MCV > 100**): B12/folate deficiency (folate in alcoholics)
- Normocytic anemia - **low reticulocyte count** (BM problem): aplastic anemia, renal disease. **high reticulocyte count** (takes 5-7 days): hemolytic anemia, sickle cell, spherocytosis, G6PD, autoimmune hemolytic anemia, microangiopathy.
- Correct reticulocyte count: **Ht / 45 x reticulocyte count > 3% is increased.**

- In reticulocytes, we can see RNA filaments under LM with methylene blue.
- Polychromesia (younger RBC, take 2-3 days to become mature, still have basophilia), **if** present in peripheral blood (normally not) ! strong BM response, pushes younger RBC out (we would prefer the reticulocyte, that need only 24 hours to mature). In order to factor them out from the correct reticulocyte count, we divide by 2 ! if now it's below 3, then the actual BM response is not good.
- Hb x 3 ~ Ht
- **For every unit of transfusion of packed RBC " "Hb by 1%, "Ht by 3%.** Patient with Hb=5 that gets 3 units, should have Hb=8, Ht=24, if it is not, we should think about GI bleed.
- Most common anemia is iron deficiency and the most common cause is GI bleed.
- MCV gives an average size, so in di-morphic (microcytic and macrocytic together, like in Celiac) RBC population, MCV will be normal.
- Iron - duodenum, folate - jejunum, B12 - ileum.
- RDW - are the RBC uniformly micro/normo/macro? Can detect size change.
- Since iron deficiency anemia doesn't develop over night, some cells will be small, and some will still normal. This could be detected by high RDW.
- Target cells are "obese" cells, because excess membrane bulges ! more Hb can collect there ! markers for alcoholics and hemoglobinopathy (thalassemia, HbC).
- Microcytic anemia (#Hb synth) ! less red, pale, **greater** central area of power. Spherocyte has **no** central area of power, all red.
- Physical signs of anemia: spoon nails = koilonychia (iron def., riboflavin def).

Pallor of conjunctiva (6g or less Hb), pale palmar creases (iron def.), lead line (gum margin discoloration), neurological symptoms (proprioception abnormalities, decrease vibratory sensation, babinski sign) in B12 def.

- Serum iron = 100, ferritin (iron storage), TIBC = 300 (= transferrin).
- #iron " "transferrin, #TIBC, ferittin!.
- **Iron / TIBC = normal % saturation = 33%**.
- #Hb ! "RBC mitosis in BM ! dividing cells are smaller ! microcytic anemia.
- HbA = 2(2& (95-96%), HbA2 = 2(2* (1-2%), HbF = 2(2) (1%)
- Iron is usually stored in MP in the BM. In inflammation (chr. disease), our body responds as if it's an infection! we don't want bacteria reaching our iron (because it increases their reproduction), so we keep it away from the bacteria, but also keep it away from the RBC**. Serum iron!**, even though we have a lot of stored iron ! not enough to make heme. **TIBC! ferittin#.**
- Heme synthesis: mitochondria ! cytosol ! mitochondria (GNG, TCA also both).
- Tetanus toxin inhibits glycine ! constant contractions.
- ALA synthase (pyridoxine co-factor) is the rate limiting step of heme synthesis.
- Ferrochelatase combines iron together with protoporphyrin
- Alcohol related anemia: #1: of chronic disease, #2: folate def.
- Sideroblastic anemia (least common), **iron overload disease, "ferittin, TIBC#**: 3 causes: #1: **alcohol**: uncoupler ! every reaction in the mitochondria is dysfunctional, incl. heme synthesis ! iron that enters RBC, some stored in ferritin, most enter mitochondria where it cannot escape. Mitochondria is around the nucleas of RBC ! ring sideroblast (seen in BM stained with Prussian blue). #2: **B6 deficiency** (isoniazid treatment) ! no ALA synthase reaction.

#3: **lead poisoning**: denature protein, mostly ferrochelatase, also ALA dehydrase.
Lead denature ribonuclease ! ribosome persist ! coarse basophilic stippling. Lead can deposit in the epiphysis (seen on x-ray) ! growth retardation, wristdrop. Symptoms: severe abdominal colic, cerebral edema ("vessel permeability ! ALA accumulate, neurotoxic), convulsions, diarrhea, FTT, anemia.
Causes of lead poisoning: automobile factory (batteries), pottery painter, moon shine
(make alcohol), kid eating paint or plaster **&**-thalassemia: Blacks (like G6PD, sickle), Asians. 4 genes responsible for making globin chains:
one deletion - no anemia
two deletions - mild anemia (globin# ! microcytic),
three deletions- bad anemia with hemolytic component (##globin) ! form **HbH** (can diagnose with electrophorsis).

four deletions - spontaneous abortion, can't live. 4) hemoglobin ! **hemoglobin barts**
(show up on electrophoresis, but doesn't matter…).

- Far east: high tendency of abortion due to (-thalassemia ! "choriocarcinoma.
- Thalassemia: Blacks, Italians, Greeks. &: normal, &+: #&, &°: no &.

Severe (Cooley's anemia) - stop codon. Constant transfusion, death before 30 (from iron overload or transfusion related viruses).
Mild - splicing defect. #& ! HbA# ! "HbA2, "HbF (show on electrophoresis).

- We do not treat the mild thalassemias ((&&). **Don't give iron !** iron etc. - normal.
- &*-thalassemia: hereditary persistent HbF disease, "HbF. No symptoms.
- Iron deficiency reasons: **prematurity** (give iron supplements), bleeding Meckel's diverticulum in a **newborn**.

Women: under 50: mainly menorrhagia. Under 20: **a**novulatory cycles.
20-40: ovualotry cycles with irregular shedding, inadequate luteal phase, pregnancy related bleed, endometrial polyp bleed.
Men: peptic (duodenal) ulcer disease
Over 50: colon cancer.

- Undigested iron tablets in a baby (mom with menorrhagia) can be seen on X-ray.
- B12/folate deficiency ! dTMP deficiency ! immature nucleas ! big cells.
- Circulating form of folate is methyl-THF.
- Purpose of cobalamine: taking off the methyl group of methyl-THF ! methylcobalamine ! gives the methyl group to homocystein ! methionine (needed for 1C transfer reactions).
- Folate (less B12) def. ! "homocystein ! produce thrombosis including MI.
- MTX, trimethoprim inhibit DHF reductase (DHF ! THF).
- B12 is a co-factor for this reaction: methylmalonyl CoA ! succinyl CoA. Excess propionyl CoA, methamalonic acid (specific, sensitive test for B12 def.)
- Demyelination ! dementia, proprioception and vibratory problems, spasticity, babinski sign).
- B12 deficiency can present as a neurological disease without anemia.
- Dementia: check B12 and TSH (hypothyroidism), both reversible causes.
- Pure vegan (no dairy or meat) need B12 supplements.
- Crohn's disease in terminal ileum: #B12, #bile salts ! malabsorption
- Pernicious anemia ! atrophic gastritis of body and fundus ! achlorhydia !
- predisposing factor of gastric adenocarcinoma.
- Chr. pancreatitis (alcoholics) ! cant cleave off the R-factor ! #B12
- Diphyllobothrium latum (fish tape-worm) "eating" B12-IF complexes
- Bacterial overgrowth (peristaltic problem, diverticular pouches) ! B12-IF and bile salt deficiency.
- Folate is eaten in a poly-glutamate form which cannot be absorbed in the jejunum, and has to be transformed into mono-glutamate form by intestinal conjuagase (**blocked by phenetoin**).
- OC and alcohol prevent absorption of mono-glutamate form of folate.
- B12 stores last 6-9 years, folate stores last 3-4 months.
- Hypersegmented nuclei (> 5 lobes), arrive before the anemia developes.
- Romberg test: patient stands with eyes open and then closed; if closing the eyes increases the unsteadiness ! loss of proprioception (posterior column disease).
- Weber test for hearing can also be used to detect vibratory problems.
- B12/folate deficiency can lead to pancytopenia (cells are too big, can't get out to circulation).
- **Positive** Schilling's test **with IF** ! pernicious anemia.

Positive Schilling's test **with correction by antibiotics or pancreatitc extract** !
bacterial overgrowth or chr. pancreatitis
Negative Schilling's test ! crohn's, worm, etc…

Normocytic anemia with **corrected reticulocyte count < 2%:**

- EARLY iron deficiency, anemia or chronic disease. check ferittin, it is first to decrease. All iron studies# before any anemia present.

- Aplastic anemia: have to do BM, everything is decreased. Idiopathic mostly. **Drugs**: chloramphenicol (RMSF), indomethacin (gout), phenylbutazone (arthritis), thyroid related drugs.
- **Infections**: HCV (parvovirus destroys only RBC)
- Radiation.
- Chronic renal failure ! #erythropoetin (give orally)
- Blood loss of less then a week.
- Malignancy.

Normocytic anemia with corrected reticulocyte count > 3%:

Hemolytic anemia - **extravascular**: IgG, C3B on the surface (autoimmune), abnormal shape (sphere, sickle - removed by MP, don't leave spleen).

End product of phagocytizing an RBC ! unconjugated bilirubin in the MP ! leaves MP, bind albumin, go to liver (doesn't get to urine) and get conjugated.

Clinical finding of extravascular hemolytic anemia is jaundice.

Intravascular: smash into something (calcified valve, IgM mediated).

Hb is released (! hemoglobinurea), haptoglobin binds it (! #haptoglobin). Usually **no** jaundice.

- **Extrisinsic**: problem not related to RBC - smash into valve and so on.
- **Intrinsic**: **M**embrane defect (spherocytosis, PNH), **A**bnormal Hb (sickle cell), **D**eficient enzyme (G6PD):
- Spherocytosis (AD): spectrin defect, no central area of power. Removed extravasculary (spleen), jaundice, splenomegaly, gall bladder disease (unconjugated bili" ! conjugated bili" ! supersaturation of bile ! Ca-bilirubinate stone). Diagnosis: **"osmotic fragility**. Treatment: splenectomy.
- PNH: defect in decay accelerating factor. Acidosis at night ! complement activation ! attach to all blood cells, protected by decay accelerating factor. Pee Hb in the morning, **pancytopenia**.
- Sickle cell (AR): **Trait** - no anemia, no sickle cells in peripheral blood (could have in renal medulla peritubular capillaries).

Black, normal CBC, normal physical, microscopic hematuria ! sickle cell screen. **Disease** - over 60% HbS ! can spontaneously sickle. Oxygen tension can induce sickling. Hemolytic anemia (can be severe, requires transfusion). Occlusion of small blood vessels ! veso-occlusive crisis ! ischemia of lung, liver, spleen, BM. In children - dactylitis (digit inflammation) of hands and feet ! pain. Splenomegaly, followed later by autosplenectomy (~age 20).

Howel-Jolly body in peripheral blood - spleen not working (if it was, the MP would have removed them) ! Strep. Pneumoniae sepsis (most common cause of death).

Pneumovacc. can only be given at age 2.

Veso-occlusive crisis: HbF inhibits sickling, but when HbS increase (6-9 months) ! first crisis.

Susceptible to osteomyelitis by salmonella (which is normally destroyed by MP). Hydroxyurea: decrease incidence of veso-occlusive crisis by increasing HbF synthesis (has to be taken with a chemotherapy agent).

- Lesch-Nyan syndrome (X-linked recessive): purin metabolism defect, "uric acid, HGPRT deficient. Mentally retarded, self mutilation.
- G6PD deficiency (X-linked recessive): Black, Greek, Italian.

Peroxide (made by every cell) can be neutralized by catalase or glutathione. Peroxide is increased in infections or when taking sulfa or nitro drugs (chloraquine for malaria, dapson for leprosy) or eating fava beans.

Cause Hb clumping, damges membrane! Heinz Bodies (= bite cells). Mainly intravascular hemolysis, but also extravascular.

Diagnosis: during episode - normal enzyme essay, special stain to identify Heinz bodies. When hemolytic episode is over, you confirm diagnosis by enzyme essay.

- Family with autoimmune disease, best screening test is HLA.
- Autoimmune hemolytic anemia: warm - IgG, cold - IgM. Most common is warm. IgG, C3b on RBC, removed by MP (extravascular).

IgG C3b **on RBC surface** can be checked by **direct Coombs** test (like this case). Ab in the **serum** can be checked by **Indirect Coombs**.

- Most common causes of autoimmune hemolytic anemia: #1: SLE, #2: Drug induced: penicillin, methyldopa (anti HT) - **H-S type 2, IgG, extravascular**.
- Quinidine - **H-S type 3** (innocent bystander), **IgM, intravascular**.
- Methyldopa and hydralazine can both be used in pregnancy. Hydralazine can precipitate drug induced lupus, 2nd

to procainamide.

- Schistocyte (fragmented RBC): most common cause is aortic stenosis, followed by DIC, TTP, HUS. Intravascular hemolysis (because its chronic ! iron loss ! can be accompanied by iron deficiency anemia).
- Also called runners anemia (from hitting the pavement) ! hemoglobinurea.
- Aortic stenosis: systolic ejection murmur, right 2nd intercostal space, radiating to carotid, S4 sound, increase intensity on expiration.
- Malaria: hemolytic anemia. Quotidian (anytime) fever correlate to cells rupture.
- Leukomoid reaction: can involve any of the cell lines. Caused by serious infections (TB, sepsis). Mainly in kids (otitis media). **Neutrophils > 30,000**.
- Pertusis: (mature, typical) **lymphocytosis > 60,000** (looks like ALL).
- Atypical (T) lymphocyte (= Downey cells, antigen stimulated lymphocyte, grows bigger): mononucleosis (EBV), CMV, toxoplasmosis, hepatitis, phenetoin.
- Mononucleosis: viremia, generalized painful lymphadenopathy, exudative tonsillitis, hepatitis **without jaundice** (ALT, AST > 2000). Spleen with tendency to rupture (not auto) - do not do contact sport for 6-8 weeks.

Diagnostic test: mono spot = heterophilic Ab - anti-horse RBC Ab (unique to mono), anti-sheep RBC Ab.
Once you have mono, you always have it. 3-4 recurrences in a lifetime.

- Monocytosis (chronic): rheumatoid arthritis, IBD, SLE, malignancy.
- Eosinophilia: hay-fever, penicillin rash, Strongyloides, Trichuris.

Amebiasis, Malaria, Enterobius (pinworm), Ascaris **do not cause it**. Only invasive helminthes do.

- Creatinin", urea normal ! oral creatine.
- **Relative** polycythemia: Most common cause of polycythemia

Decreased plasma volume ! normal RBC mass, "RBC count, normal O2 sat.
Absolute polycythemia: "RBC mass.
Appropriate - tissue **hypoxia**: COPD, high altitude.
Inapprorpriate - **no hypoxia**: polycythemia rubra vera, tumor (e.g. renal adenocarcinoma) or cyst with excess production of erythropoietin.
Meloproliferative disease: Stem cell disease (neoplastic) with stem cell that lost all regulation (no inhibition) - Polycythemia rubra vera, CML, agnogenic myeloid metaplasia (myelofibrosis), essential thrombocythaemia (least common), myelodysplastic syndrome (pre-leukemia).
Polycythemia rubra vera: "RBC mass, "plasma volume, normal O2 saturation, #erythropoietin.
Hyper viscosity! "resistance, thrombosis (Budd-chiari, dural sinuses, coronary artery, SMV) as the leading cause of death.
Phlebotomy: reduce viscosity, reduce iron (slowing down RBC synthesis)
Hyper volemia: PRV is the **only** polycythemia where "volume matches "RBC mass, both can be measured by radioactive techniques.
Histaminemia (mast cells, basophils increase): itching after temperature change, red looking face, migranes.
Generlized itching: Bile salt deposition (obstructive jaundice), mast cell degranulation. **H**yperuricemia: "nucleated hematopoetic cells! when die, purin metabolism gives uric acid. Give allopurinol to prevent renal failure due urate nephropathy (also from dying cancer cells in chemotherapy - tumor lysis syndrome).

- COPD, Tetralogy of Fallot, high altitude: "RBC mass, normal plasma volume, **!O2 saturation**, "erythropoietin.
- Renal adenocarcinoma, hydronephrosis, Wilm's tumor: "RBC mass, normal plasma volume, normal O2 saturation, **"erythropoietin** (ectopic production).

Leukemia: malignancy of stem cells in BM that can metastasize anywhere. Generalized lymphadenopathy, HSM.
Abnormal cells in peripheral blood = blasts.
Crowded BM ! anemia (usually normocytic), thrombocytopenia, "WBC.

- BM ! count blasts: if **< 30%** ! **chronic**, if **> 30%** ! **acute**.
- Age: **0-14**: ALL, **15-39**: AML (Auer rods), **40-59**: AML, CML, **60+**: CLL.
- CLL is the most common leukemia regardless of age. Most common cause of generalized non tender lymphadenopathy (metastases) in patients over 60.
- Neutrophil alkaline phosphatase score: overlay stain for AP on smear, check which neutrophils take up the stain ! mature neutrophils all have AP, neoplastic ones do not take it. Take 100 cells, grade each cell's intensity with 1-4 score ! CML: low or 0 score. Another study is Philadelphia chromosome.
- Agnogenic meloid metaplasia: extramedullary hematopoiesis (e.g. spleen, which is huge). Megakaryocyte cause

BM fibrosis. RBC which stay in the fibrotic BM, in order to get out to the sinusoids, have to go through fibrotic tissue, that damages its membrane = tear drop (marker).

- ALL is the most common cancer in kids. CALLA CD-10 positive B cell leukemia.
- CLL: smudge cells, hypo-)-globulinemia (neoplastic cells do not change into plasma cells ! most common cause of death is infection).
- TRAP stain - hairy cell leukemia (cells with projections of the cytoplasm).

AML: Auer rods (abnormal lysosomes),
Acute monocytic leukemia (M5) likes to invade gums.
Acute promyelocytic anemia (M3): t(15,17). Always have DIC. Treat with retinoic acid.
Painful lymphadenopathy is never malignant ! inflammatory condition, but not necessarily infection, could be SLE for example.
Painless: #1: metastases, #2: 1° lymphoma (follicular).
Generalized = systemic disease
Bruton's agammaglobulinemia: germinal follicle (B-cells) will be absent Di-george: para trabecular (T-cells) area will be absent.
Histioctosis X: CD1 positive, sinus is absent.
SCID (ALA deaminase def.): combined B+T def., histiocytes are present.

- Follicular lymphoma (B-Cells) is the most common Non-Hodgkin's lymphoma. t(14,18) ! apoptosis knocked off.
- Cartilage and elastic tissue are the two tissue resistant to invasion of cancer cells.
- Burkitt's lymphoma: EBV, t(8.14), transfer of myc oncogene. Stary sky appearance (stars = normal benign MP). 3rd most common cancer in kids. Most common **abdominal** lymphoma in kids in the US (peyer's patches, para-aortic lymph nodes, even testes). Burkitt's in the jaw is frequent in Africa.
- Mycosis fungoides: neoplastic cells are Th cells. Plaque like lesion. Involves skin, lymph nodes. When the malignant Th cells get to the peripheral blood it is called Sezary syndrome.
- Malignant histiocytic disease: monomorphic CD-1 positive empiric cells with Birbeck granule (tennis racquet) under EM.
- Clostridium tetany spore also looks like a tennis racquet.
- Fever, night sweats, weight loss have TB until proven otherwise.
- Hodgkin's disease: Reid-Sternberg cell (owl eyes, so is CMV, giardia, Aschoff's nodule of RF) is the neoplastic cell. Less RS cells ! better prognosis.

Most common one is nodular sclerosis (more common in women, **unlike** other 3).
Typical presentation: women, lymph nodes involvement in 2 places, one of which in the anterior mediastinum (presents as a mass), 2nd one is somewhere above the diaphragm (e.g. neck).

- Serum protein electrophoresis: albumin migrates the furthest,)-globulin stays put. Albumin ! (1 ! (2 ! & !).
- **Polyclonal gammapathy**: multiple clones of plasma cells which produce **GAM**MA
- globulin = IgG - most abudant, IgA, IgM - least. IgE, IgD very little). In electrophoresis, in the)-globulin region, the peak is increase in IgG (RA, IBD), seen as big diffuse elevation. **Benign, chronic inflammation**.
- **Monoclonal**: one clone of plasma cells, the others are suppressed by immunological mechanism. **Malignancy** of plasma cells (mostly MM), mostly IgG ! light chains get into the urine ! Bence-Jones protein.
- MM is incurable unless you have a BM transplantation. Usually > 50 years (a bit more common in women). Most common type is of Ig kappa. Plasma cells release IL-1 (osteoclastic) ! nice neat round, sharp bordered, lytic lesion in the bone (Paget's disease - fuzzy looking) ! pathologic fracture (cough can fracture a rib).

- Amyloidosis: systemic disease. Pre-albumin, calcitonin, light chains can be converted into amyloid. Chr. 21 codes for &-amyloid protein, so Down's syndrome are more common to develop it. &-amyloid is toxic to neurons ! senile plaques in frontal + temporal lobes, atrophy in the brain. **All** Down patients will develop Alzheimer's if they live to age of 35-40 (in childhood they usually die of the endocardial cushion defect in their hearts).
- Gaucher's disease (AR): **wrinkled cytoplasm** appearance of MP, lysosomes filled with glucocerebrosides (glucocerebrosidase deficiency).
- Niemann-Pick disease: **bubbly cytoplasm**, severe mental retardation, sphyngomyelin accumulation (sphyngomyelinase deficiency).
- Pompe's disease is the only glycogen storage disease with lysosomal glycogen storage (lysosomal)-1,4-glucosidase deficiency, can't break it). Excess deposition of glycogen in the heart is the main cause of death.
- Heparin (GAG) prevents clots by enhancing AT3 (which can only inhibit serine proteases - XII, XI, X, VII, II, prothromin). Evaluate it with PTT which is prolonged (PT is less good, but **also** prolonged)
- PGI2 prevents platelet activation
- Protein C, S inactivate factors V, VIII (not serine proteases)
- TPA activates plasminogen.
- OC increase synthesis of V, VIII, fibrin and inhibit AT3 ! heparin antagonist. OC + smoking (damage endothelial cells) ! thrombosis.
- Bleeding time is used to estimate **platelet aggregation**, function (nothing to do with coagulation factors). Check when bleeding stops (7-9 min).
- Small vessel bleed: **Tissue thromboplastin** released whenever a tissue is damaged ! activate extrinsic pathway.

Exposed collagen in that wound ! activation of **factor XII**.
Endothelial cells and megakaryocyte produce adhesion molecules - **vWF**.
When platelet stick, with the help of vWF, they release chemicals ("release reaction"), the most important of which is **ADP** which is an aggregating factor.
Platelets also need **TXA2** (vasoconstrictor, bronchoconstrictor, platelet aggregator) which they make themselves (**only cell** that has TXA synthase).

- Prolonged bleeding time: thrombocytopenia < 90,000 or vW disease (AD)
- Aspirin inhibit the platelet COX, 9 times stronger than the endothelial COX.
- Aspirin is an **irreversible** inhibitor of COX, other NSAID inhibit it for **48 hours**.
- Platelet problem: bleeding time", **bleeding from superficial scrathes/cuts** (no temporary hemostatic plug), **petechia**, **pin point hemorrhage**, **nose bleed** (most common) **ecchymosis/purpora** - none of which occur in coagulation deficiency.
- Coagulation problem: bleeding time normal. Massive amount of **delayed bleed**, because there is only temporary hemostatic blood held together by fibrinogen (not fibrin). e.g. wisdom tooth removed or surgical procedures with bleeding problem. **Menorrhagia, hemoathrosis, GI bleeds and bleeding into closed spaces**.
- Ristocetin cofactor is the most sensitive test to diagnose vW disease. In vW disease it cannot cause platelet to clump.
- Donor platelets (platelet pack transfusion) can work in a bleeding patient with platelet problems (NSAID), even though the patients own cannot.
- PT: evaluation of extrinsic pathway = INR. PTT: evaluation of intrinsic pathway.
- Most common factor deficiency: #1: vW disease, #2: Hemophilia A
- Warfarin blocks epoxide reductase ! prevent)-carboxylation of II, VII, IX, X. we evaluate warfarin with PT which is prolonged (only factor which we're not evaluating is IX). PTT is **also** prolonged, yet PT is better.
- Fibrin degradation products (D-dimers) is the best screening test for DIC. Proves that there was a clot (coronary artery platelet thrombosis, held together by fibrin).
- PE: D-dimes and ventialation/perfusion scan are the best test.
- Fibrin stabilizing factor (factor XIII) links fibrin (cross bridge), makes it stronger.
- Vascular diseases: **Scurvy**.

Senile purpura on the back of the hand (place that hits things) because of vessel instability and subcutaneous tissue thinning. Age dependant, all will have it.
Osler-Weber-Rendu disease = hereditary telangiectasia (most common genetic vascular disease): chr. iron def. anemia

related to GI bleed, telangiectasia (little red spots) on fingers, lips, tongue, entire GI.

- Petechia, when you press on it doesn't go away, spider angioma (AV fistula) does.
- ITP: platelet very low, IgG against platelet (H-S type 2), MP in the spleen removing the platelet. If very symptomatic - corticosteroids, if not - nothing. Mainly in kids. ITP can be part of SLE (women usually).
- TTP, HUS: PTT, PT are normal, bleeding time prolonged. Something in the plasma damages small vessels throughout the body ! stick, aggregate, clot ! thrombocytopenia ! bleeding. RBC smashed into the thrombi ! schistocytes ! micro angiopathic anemia. Fever, renal failure.

HUS is caused by either 0157:H7 E. coli toxin or shigella toxin.
One of the most common cause of renal failure in children is HUS.

- **Hemophilia A Vs. vW disease**: in vW disease we see all the symptoms of platelets problem but on top of that they have a mild factor 8 def. that cause a coagulation defect ! combined symptoms.

Factor VIII molecule: VIII coagulant, vWF, VIII antigen (carrier protein). Classical vW disease is **AD**, hemophilia A is **X linked** and appear in men. Hemophilia A - **!VIII coagulant**, vW disease - **all 3** are decreased.
ddADP (desmopressin) can cause synthesis of all 3 compononent, help to treat MILD hemophilia A and it's the choice treatment for vW disease.
Estrogen (OC) increases the synthesis of all 3 components, so girls stop bleed. Sensitivity of PTT and bleeding time being abnormal is vW disease is 50%.

- Anti PL syndrome: lupus anticoagulant (seen in SLE, HIV), anti-cardiolipin Ab (**produce false positive syphilis serology**, check FTA-ABS to make sure), both cause vessel thrombosis.

A woman with a biological false positive syphilis serology should first of all get a serum anti-nuclear Ab test for SLE.

- DIC: problem in laboratory diagnosis, easy clinically. Clot forming throughout the body in small vessels ! fibrinogen, V, VIII, prothrombin and platelet are consumed ! bleeding from every orifice (mouth, anus, penis, venus punctures). In a "clot tube", which has serum on top, serum will be missing all those factors, so only serum is circulating without the plasma.

Septic shock (E. coli), snake bite (rattle snake), ARDS, amniotic fluid emolism (contain thromboplastin) can cause it.
PT, PTT prolonged, platelet count decrease, D-dimers positive (most important).

- Hereditary thrombosis: young person with DVT. Leyden factor V (protein C cannot break it), AT3 deficiency (if you **give heparin and PTT remains normal**).
- Aspirin treatment: platelet normal, "bleeding time, PT-PTT normal. ITP: #platelet, "bleeding time, PT-PTT normal

HUS, TTP: #platelet, "bleeding time, PT-PTT normal
Hemophilia A: platelet, **bleeding time** and PT - normal, PTT prolonged. vW disease: platelet normal, **"bleeding time**, PT-PTT normal.
Warfarin, heparin: platelet and bleeding time normal, "PT-PTT.
O: anti A IgM, anti B IgM, anti AB IgG. Universal donor.
A: anti B IgM
B: anti A IgM
AB: no antibodies. Universal recipient.
Newborns: no antibodies (don't begin synthesizing IgM before they're born, IgG is only produced after 2-3 motnhs).
Elderly: antibodies level very low.

- Relations: gastric cancer - A, duodenal ulcer - O.
- Duffy Ag - missing in the black population (less likely to get malaria from **Vivax**, they need it to get into the RBC). Thalassemia, sickle cell, G6PD protect against malaria from **Flaciparum,** because their life span is short.
- Major cross match: serum of patient getting blood + RBC from donor. Looking if there's anything in the patient serum that will attack the donor's RBC.
- Every unit of blood increases the risk of developing Ab which may attack later transfusions.
- Ab against CMV is the most common Ab in the US.

CMV is the most common infection transmitted by blood transfusion

- HCV is the most common hepatitis related virus transmission.
- HIV screening: **gp120** is measured by ELISA, western blot looks for **3-4 different Ab**
- (very specific).
- Any blood that a new born gets is being radiated to kill all lymphocytes. CMV lives inside lymphocytes.

- If you stick you finger with a needle of HIV patient (most common way of medical personal of accidentally getting HIV), there's a 1:300 of getting it. You start triple therapy **for 6 months** as if you got infected.
- Don't transfuse an ASYMPTOMATIC patient.
- Never use FFP to expand a patient's plasma volume (use saline…).

Use FFP for multiple coagulation disease like DIC, bleeding due to liver cirrhosis or bleeding due to warfarin over anticoagulation (not intramuscular vit. K which takes 6-8 hours to work).

- Bleeding due to heparin over anticoagulation is treated with protamine sulfate which works immediately.
- Transfusion reactions: allergic (treat with benedril and antihistamines), febrile (due to anti-HLA Ab against the donor's WBC, release pyrogens).
- If I never got a blood transfusion, I will NOT have any anti-HLA Ab.
- Every women who was pregnant (also abortion), has anti-HLA Ab developing against her baby's WBC. More pregnancies ! more risk. This is H-S type 2.
- Hemolytic transfusion reactions: "clerical error" (giving wrong blood) or patient has an Ab against RBC Ag (some Ab are not present but we have memory B-cells, from past experience to produce them) which can be **immediate** (hours) or **delayed** (after days- week, you get jaundice and a drop of Hb ! check with Coomb's test).
- ABO incompatibility can be a problem in the **first** pregnancy ! anti AB IgG Ab against baby's RBC, destroyed by MP in baby's spleen ! anemia, unconjugated bili derived from that MP is handled by mom's liver in utero. When baby is born they will develop jaundice and **mild** anemia (liver conjugation system isn't as good) ! put them under UV light (converts bili in skin to dipyerol - water soluble, peed). Coomb's test on baby's RBC (covered by IgG Ab) will be positive.
- The most common cause of jaundice in a newborn in the **first 24 hours** is ABC incompatibility. Physiological jaundice of a new born starts on **day 3**.
- Rh incompatibility (mom negative, baby positive): **First pregnancy** - feto-maternal bleed ! baby's O+ cells cause mom to develop anti D Ab against ! sensitized ! **2nd pregnancy** - IgG Ab cross placenta, attach D Ag ! baby - more severe anemia ! exchange transfusion (all blood out) at birth.

Prevention: Ab screen negative. Around 28 week, give Rh Ig as prophylaxis (anti D, doesn't cross placenta) incase of feto-maternal bleed before birth. With a special test (stain mom blood to identify fetal RBC), we can decide how many Rh Ig to give mom to protect her further (for about 3 months, while anti D lasts).

- ABO and Rh incompatibility: Not a problem in most cases, mom destroys RBC so fast. **ABO incompatibility actually protects against Rh sensitization**. Still give Rh Ig, just incase.
- Erythroblastosis fetalis (Rh incompatibility): death of high output heart failure (severe anemia decreases viscosity of blood), left first, later right. Huge liver (extramedullary hemopoiesis).
- Orange color in a baby's brain ! Kern icterus.

Cardiovascular:

Jugulo-venous pulse (checked on right side): **A wave** - atrial contraction of late diastole (last contraction cause some backflow into venous pulse)

C wave - systole (blood hits tricuspid valve into atrium, **S1**)

X wave - blood through pulm. artery creates negative pressure, sucks valve down.

V wave - filling of right atrium (beginning of diastole, **S2**) **Y wave** - tricuspid valve opens, blood goes to ventricle.

- Mitral stenosis ! atrial fibrillation ! A wave disappears (**S4**, if was present, will disappear).
- Tricuspid stenosis ! atrium contracts harder against close valve ! giant A wave. Tricuspid regurgitation ! in systole, blood goes to right atrium + pulm. artery ! giant CV wave.
- Turbid plasma is **only** due to triglyceride.
- In order to get the real triglyceride level (excluding chylomicrons), you **must fast**. For cholesterol, **fasting is not necessary** because chylomicrons have only 3% cholesterol. We measure HDL, LDL, cholesterol.
- In a simple tube, in 4°c, over night: chylomicron floats (supernate), VLDL is the pinkish turbidity (infranate) below it (denser, have proteins).
- Turbid infranate with no chylomicrons! **type 4** hyperlipoproteinemia.
- "chylomicron, no VLDL! patient probably didn't fast (type 1, less likely).
- Xanthelasma (yellow islet): due to cholesterol (not TAG), get a lipid profile.
- Achilles tendon xanthelasma is pathognomonic for familiar hypercholestemia (death by coronary artery disease

by age 20, no LDL receptors).

- **Atherosclerosis:** "reaction to injury" theory - injury of endothelial cells of **muscular and elastic** arteries (smoking, oxidized LDL, viruses, **Chlamydia Pneumonia**, homocystein) ! platelet stick ! GF released into artery ! SM cells in media proliferate ! migrate from media to sub-intima (below endothel).
- Monocytes have access because of injury, also release GF. MP and SM cells phagocytize oxidized LDL ! fatty streak.
- Fibroblast develop over time ! fibrofatty plaque ! complicated by dystrophic calcification, fissuring or thrombosis.
- Tc cells are involved by making cytokine.
- **Hyaline** arteriolosclerosis - HT (force proteins through basement mem.), diabetes (non enzymatic glycosylation of AA ! basement mem. permeable to proteins).
- **Hyperplastic** arteriolosclerosis (onion skin look) - malignant HT.
- Hb A1C is an example of glycosylation. It should be under 6% in diabetics.
- HT kidney - cobble stone appearance, shrunken ! fibrosis and atrophy. Lacunar strokes in internal capsule (tiny areas of infarction).
- Aneurysm: out-pouching of vessel wall due to weakening (ATH). **All** aneurysm will rupture, it's just a matter of time. Aorta below the renal artery is the most common location (no vasa vasorum there, getting less oxygen and nutriens).

Rupture triad: sudden onset of left flank pain (retroperitoneal bleed), hypotension, pulsatile mass on physical exam.
Tertiary syphilis: painless chancre = little arterioles surrounded by plasma cells (vasculitis) ! lumen is shut ! ischemic necrosis.
Aortic arch aneurysm: syphilis attack the vasa vasorum ! endarteritis obliterans ! ischemia ! weakening ! pouching under systolic pressure ! aortic valve ring stretch ! murmur with or without valvular damage (aortic regurgitation) ! "stroke volume + EF (more blood in the LV) ! pulsating, hoarseness (recurrent laryngeal n. goes around the aorta and get stretched), rupture (most common complication).

- EF: 80ml out / 120ml in the ventricle = 0.66.
- Elastic tissue fragmentation, cystic medial necrosis ! weakening.

Weakening + HT ! rupture. If it's in the pericardial sack attachment ! tamponade (proximal dissection, most common).

- Dissecting aortic aneurysm: tearing pain in retrosternal pain radiating to **back.** Pulse on the left in diminished compared to the right.

MI: sub-sternal pain radiating to arm and jaw.
Chest X-ray: diameter of proximal aorta is widened (85% sensitive, test of choice). Confirm by trans esophageal US or angiography.

- Diseases predisposing to DAA: **Marfan's syndrome** (AD, chr. 15, fibrillin defect). More common cause of death is mitral/tricuspid valve prolapse ! sudden death (conduction defect).

Ehlers-danlos syndrome (collagen defect): DAA is most common cause of death.
Pregnancy: DAA is most common catastrophic disease of the aorta (twice the plasma volume, 2:1 volume/RBC ! #Hb concentration (11.5 as anemia cut off in pregnancy, normally it's 12.5).

- Retinal vein engorgement (blurry vision), head ache, overall congestion ! SVC syndrome (1° lung cancer as the main cause ! radiation treatment).
- Sturge-Weber syndrome: vascular malformation of face ("port-wine stain", trigeminal nerve distribution) and AV malformation of brain (meningeal angiomatosis, on same side) with predisposing to bleeding. Mental retardation.
- Capillary hemangioma: red lesion on face. **Leave it alone!** (gone by age 8)
- Bacillary angiomatosis: **Bartonella Henselae** (also cause of cat scratch disease), silver stain it, treat it with sulfa drug. Only seen in AIDS, looks like Kaposi.
- Causes of angiosarcoma of the liver: vinyl chloride (plastic, rubber), arsenic (pesticides, contaminated water), thorotrast.
- Vasculitis: **small vessel** (H-S type 3) ! fibrinoid necrosis ! **palpable** purpura (not a platelet problem, where it's hemorrhagic and not palpable).

Muscular artery - Polyarthritis nodusa, Wegener granulomatosis, Kawasaki (coronary artery vasculitis)! thrombosis! infarction
Elastic artery - Takayasu arteritis! pulsless disease, strokes, "aortic arch synd.".

- Temporal arteritis: granulomatous vasculitis of temporal artery. If involves the ophthalmic branch, can cause blindess. Sedimentation rate is elevated (in arteritis, it should be elevated). Put them on corticosteroids to prevent blindness. Polymylagia rheumatica (no CK elevation unlike polymyositis).
- Buerger's disease = thromboangiitis obliterans = **Smoker's** disease: digital vessel thrombosis! auto-infarction of fingers + toes.
- Henoch-Schonlein purpura (anti IgA immune complex): most common vasculitis in
- children, associated with acute upper respiratory infection. Polyarthritis, hematuria (RBC casts! glumerolunephritis), **palpable** purpura of buttocks and lower extremities.
- Berger disease = (focal) IgA glomerulonephritis.
- Wegener's granulomatosis: **c-ANCA**. Saddle nose deformity (also congenital syphilis), upper respiratory (sinuses) + lungs problems (nodular masses), glumerular disease. Treatment: cyclophosphamide - side effects: hemorrhagic cystitis (prevented by mesna), bladder cancer.
- Polyarthritis nodusa: muscular arteries, **p-ANCA**. Young adult men. Association with
- **HBs Ag.** Usually affects the GI tract and the kidney (albumin/hematuria).
- RMSF: Rickettsia Rickettsii, tic vector (also Lyme's). Petechia which starts on extremities and spreads to trunk unlike other rickettsia: truck! extremities.
- Mucor mycosis: cerebral abscesses, association with DKA.
- Reynaud's phenomena: **cold reacting Ab** – IgM cold agglutinin disease, cryoglobulinemia (old men with **HCV)**, **Vasculitis of digits** - scleroderma/CREST (**C**yanosis, **Centromere Ab, R**eynaud's, **E**sophageal dysmotility, **S**clerodactylia, **T**elangiectasia).

Vasoconstriction - ergot derivatives (for migraines), Buerger's disease.

- Causes of death in hypertension: #1: MI, #2: stroke, #3: renal failure.
- Multifactorial/polygenic inheritance: essential HT (**blacks**), CAD, gout, DM-II, congenital pyloric stenosis.
- Essential HT: retaining of salt ! ECF" ! SV" (systolic HT), **renin.**

Salt goes into SM cells (peripheral resistance arterioles) ! open Ca channels !
muscles contract ! TPR" (diastolic HT).
Treatment of choice in blacks and elderly - hydrochlorothiazide (get rid of salt + water),
can't use it with hyperlipidemia.

- Most hypertensive **bleed** in the brain occur in the globus pallidus, putamen area (lenticulostriate branches of the middle cerebral artery are under increased risk for aneurysm = Charcot-Bouchard aneurysm, which rupture).
- Hyaline arteriolosclerosis of the kidney ! ischemia ! tubular atrophy, glomerular destruction, kidney shrink ! renal failure.
- Most common overall abnormality of HT is LV hypertrophy ("afterload) ! HF.

Concentric hypertrophy: "afterload (TPR", stenotic aortic valve, HT)
Dilatation + hypertrophy: "preload (volume overload)

S1 Systole - mitral/tricuspid valve close (mitral first)
S2 Diastole - aortic/pulmonary valve close (inspiration ! pulmonary close later)
S3 Early diastole - volume overloaded chamber, turbulence (left or right heart failure ! left or right S3). Can be normal until age 35, above - pathologic.
S4 Late diastole - compliance problem (filling ability) of hypertrophied ventricle or if it's already filled up (has to put more blood in already overfilled heart)

- Hypertension/hypertrophy - **S4,** volume overload - **S3, S4** (gallop rhythm). Rules:
- **Right sided heart murmurs** and **S3, S4** increase in intensity on **inspiration**. **Left sided heart murmurs** and **S3, S4** increase in intensity on **expiration**.
- **Stenosis** murmurs - opening problem - **opening murmur**. **Regurgitation** murmurs - closing problem - **closing murmur**.
- Aortic - right 2nd intercostal space Pulmonary - left 2nd intercostals space Tricuspid - left parasternal border Mitral - apex
- Aortic stenosis: **systole**, diamond shape configuration (**crescendo-decresendo**) = **ejection murmur**, radiate to carotid. **S4**.
- Mitral stenosis: **diastole**. **Opening snap** followed by **rumbling** sound. Atrium hypertrophy + dilation ! atrial

fibrillation, stasis, thrombosis, underfilling of ventricle.

- Mitral regurgitation: **pansystolic**. Volume overloaded atrium. **S3, S4**
- Aortic regurgitation: **diastole**, right after S2**.** Volume overloaded ventricle. **S3, S4**.
- Austin Flint murmur: occur in aortic regurgitation due to the vibration of the anterior leaflet of the mitral valve because it receives both the outflow tract into the aorta and blood from the left atrium ! surgery to replace valve.
- The best non-pharmacological treatment for heart failure is restriction of fluids and salts. The best pharmacological treatment is ACE inhibitor (#preload, #afterload). If you add spironolactone, you improve prognosis substantially.
- High output failure: **endotoxic shock** ! vasodilation of peripheral resistant arterioles
- ! HF.
- **thiamine deficiency** ! ATP depletion ! arteriolar vasodilation! HF. **Hyperthyroidism** (Grave's disease) ! thyroid increase synthesis of & receptor in the heart ! increase forct of contraction ! HF.
- **AV fistulae** ! blood coming back faster to heart due to bypass. Brenham sign: pressure on artery proximal to fistula causes swelling to diminish, thrill and bruit to cease, and pulse to fall.
- IVC ! RA ! foramen ovale ! LA ! LV ! aorta SVC ! RA ! RV ! pulmonary artery ! ductus arteriosus (kept open by placental PGE2) ! aorta.
- Breath ! oxygen levels" ! pulmonary vessel open ! blood goes through them.
- Umbilical arteries have the least amount of oxygen, umbilical vein has the most.
- **Left to right** shunt ! "oxygen saturation - **step up**

Right to left shunt ! #oxygen saturation - **step down**

- Oxygen saturation on right side (entering) is 75%, on the left side (exiting) 90%.
- VSD: left to right shunt ! RV, PA step up ! over time, if not corrected, pulmonary hypertension ! RV "contraction, could become stronger than the left ! shunt reversal (Eisenmenger syndrome, cyanosis tardii). Most close spontaneously, some need to be patched.
- ASD: left to right shunt ! **RA**, RV, PA step up ! Eisenmenger syndrome, paradoxical embolization.
- Fetal alcohol syndrome: most common teratogen producing disease with ASD.
- PDA: left to right shunt ! PA step up. Machinery murmur between the shoulder blades. Volume overload right side ! pulmonary hypertension ! DA empty distal to subclavian artery ! pink on top, blue on bottom (differential cyanosis).

Congenital rubella is the teratogen associated with PDA.
Indomethacin (potent NSAID) inhibits PGE2 ! constriction, PDA closes.
Teratology of Fallot: overriding aorta, membranous septal defect, pulmonary stenosis **below** the valve, right ventricular hypertrophy. Right to left shunt.
The degree of pulmonary stenosis will determine whether you develop cyanosis. PDA and ASD are cardio-protective in TOF patients.

- Right to left shunting: polycythemia, "risk of infective endocarditis
- Transposition of great vessels (**Kartagener syndrome is not a transposition**): Right ventricle emptied by the aorta, left ventricle emptied by the pulmonary artery ! incompatible with life unless you have shunts (usually all 3). **RV** step up.
- Coarctation of the aorta: **preductal** - occur in Turner's syndrome. Systolic murmur between shoulder blades. BP in upper extremities > lower extremities.

Potential for sub-arachnoid bleeding, strech aortic valve ring ! aortic aneurysm, dissecting aortic aneurysm.
Postductal - don't present at birth, happens in adulthood. Surgically correctable cause of HT. Claudication, BP different between lower and upper extremities, renal artery BF# ! RAS activation ! HT with **"renin**.
Collaterals - superficial epigastric artery-internal mammary artery, intercostals (seen on X-ray as rib notching).

- **In all people** - the junction where the communicating branches connect to the main branch of the cerebral vessels is a weak area (no internal elastic lamina or smooth muscles) ! berry aneurysm risk, exacerbated by HT.
- CAD risk factors: age is the most important risk factor - men > 45, women > 55 (estrogen is protective, when you reach menopause, HDL decrease to men's range! "risk), family history of CAD/stroke, **any** smoking, HT, diabetes, **HDL < 35 (if HDL > 60, you can subtract another risk factor, like age)**.

- IHD: angina, acute MI, sudden cardiac death, chronic ischemic heart disease : ***Sudden death*** (25%): death within one hour. **No thrombosis**, but severe coronary artery disease (ATH). Ischemia ! PVC ! R on T phenomenon ! VF ! death.

Chronic ischemic heart disease: little infarcts (subendocardial) ! muscle get replaced by fibrotic tissue, #contractility ! **EF = 0.2** ! HF.
Angina: **Classical** - chest pain when you exerting, goes away after 5-10 min of
resting. ST depression (subendocardial) of 1-2mm ! coronary angiogram. **Prinzmetal** - usually occur in morning, due to vassal spasm (**TXA2**), not ATH. ST elevation (transmural).
Unstable - while resting, initially classical that got worse ! hospitalized, angiogram, angioplasty. **No treadmill**.
CABG - use Saphenous vein (get arterialized within 10 years due to the pressures !
high tendency of fibrosing after 10 years
Internal mammilary artery (no fibrosis, remain patent, but we only have one).
Acute MI: thrombosis of platelet held by fibrin, TPA breaks it easily (venous clot is harder to break) ! reperfusion injury but no further extension.
Pale infarct - 24 hours. Coagulation necrosis - 4-6 hours (visible under LM).
EF is the best prognostic factor for how well you'll do after infarct. Complications of MI: **thrombosis** -
LAD supplies entire anterior part and 2/3 of septum (most conduction bundles). **RCA** supplies entire posterior part, posterior 1/3 of septum, entire RV. AV node is almost exclusively supplied by it (SA is 50%). Complications - mitral regurgitation during MI (posterio-medial papillary muscle dysfunction or ruptured, supplied by the RCA, **new** S4), sinus bradycardia, atypical (epigastric) chest pain.
Rupture - most are anterior (LAD thrombosis) ! hemopericardium (chest pain, muffled heart sound, neck vein distended).
Septum rupture gives left to right shunt, most are LAD thrombosis related. Mural thrombosis - **mixed** clot, prevented by giving aspirin (against platelet aggregation) + warfarin/heparin (for coagulation factors). Can embolize.
Fibrinous pericarditis - occur two times - **first week** (friction rub, chest pain relieved by leaning forward) and **6 weeks later** - Dressler syndrome (autoimmune pericarditis, 3 component friction rub). Treat with NSAID.
Ventricular aneurysm - late manifestation. Systolic bulge of precordium: blood collecting in the aneurysm ! makes the chest bulge out. It does not rupture because it is lined by scar tissue. Die of HF because aneurysm covers the ventricle.
Diagnosis: Gold standard - CK-MB: appears after 6 hours, peaks at 24, last for
3 days (re-appearance after 3 days means re-infarction). Troponin - appears after 4 hours, peaks at 24, lasts 7 days.
Normally LDH2 is higher than LDH1. In MI ! LDH flip - LDH1 becomes higher, appears after 18 hours, peaks at 3 days, lasts 7 days.

- Mitral valve prolapse: "too much" valve, parachute look, blood underneath pushes the valve into the LA ! click murmur - **#preload** (lying) ! closer to **S2** (takes longer to get blood out), **!preload** (standing, anxiety) ! closer to **S1**.
- Excess of dermatan sulfate (made from GAG) on the valve ! redundant valve.
- Aortic stenosis: most common valvular cause of syncope/angina with exercise, most common cause of microangiopathic hemolytic anemia.
- "preload ! "intensity of murmur (distinguish it from hypertrophic cardiomyopathy)
- Rheumatic fever is the most common cause of mitral stenosis (most common valve involved). Caused by group A, & Strep. Pyogenes (ASO titer elevated).
- Post pharyngitis (and not a skin infection). M protein is the pathogenic factor ! Ab against those, attack heart, joints, brain (basal ganglia) - mimicry. Sterile vegetation, no embolization, erythema marginatum (nodules, immunological) ! Sydenham chorea is a complication of that (months after). **Jones criteria**.
- Most common valvular lesion of acute rheumatic fever is mitral regurgitation murmur (the stenosis takes at least 10 years to evolve).
- Polyarthritis - juvenile rheumatoid arthritis, HSP, rubella, acute rheumatic fever.
- Mitral stenosis - fish mouth appearance of the valve Most posterior located chamber of the heart is the LA.
- In mitral stenosis, the LA presses esophagus ! dysphagia only for solid, presses recurrent laryngeal nerve ! hoarseness (Ortner's syndrome)
- Irregular-regular pulse ! atrial fibrillation ! thrombosis from LA embolize.
- Mitral valve prolapse is usually asymptomatic, can have palpitation. A rare complication is tear of the chordae

tendinae ! mitral insufficiency ! death. Most common genetic related to it are Marfan and Ehlers-Danlos syndromes.

- IV drug abusers ! infective endocarditis (Staph. Aureus) ! #1: tricuspid regurgitation, #2: aortic regurgitation.
- Carcinoid syndrome (with liver metastases) ! serotonin produces a fibrous tissue response of the valves ! **TIPS** (tricuspid insufficiency, pulmonary stenosis)
- Most common organisms to cause infective endocarditis: #1: Strep. Viridans (mouth flora) on **damaged** valves, #2: Staph. Aureus on both **normal and damaged** valves. Most common valves involved: #1: mitral, #2: aortic.

Strep. Bovis cause infective endocarditis associated with **UC or colon cancer**.

- Membranous portion of the septum has a close relationship with the aortic valve ! vegetation on aortic valve due to VSD ("risk for infective endocarditis).
- Splinter hemorrhage (fingers): **painful** - Osler nodes, **painless** - Janeway lesions. Koplik spot in the eye (red with white center) in measles.
- All of these + glomerulonephritis are seen in infective endocarditis (type 3 H-S)
- Most common lesions of the heart in SLE (positive ANA): #1: pericarditis. Libman- Sacks endocarditis (vegetation all over the valve). Fibrinoid necrosis.
- Marantic vegetation is a paraneoplstic syndrome of mucus secreting colon cancer. Looks exactly like acute rheumatic fever (with the appropriate history) - vegetation along the margins of the valve.
- **If you get an infection question with Coxsackie virus as an answer, mark it.** It's the most common cause of: myocarditis, pericaridits, viral meningitis, hand-foot disease, herpangina. Do a biopsy of myocardium ! lymphocytic infiltrate.
- Congestive (=dilated) cardiomyopathy: big LV+RV (huge heart), dyspnea.

Causes: post partum (6 weeks), Coxsackie (myocarditis complication), doxorubicin, tricyclics, thiamin deficiency.
Most common reason for cardiac transplant in adults.

- Hypertrophic cardiomyopathy is the most common cause of sudden death in young athletes (conduction defect in an asymmetrical hypertrophied septum). ""Thickness of septum, "contraction ! obstruction due to narrowing **below** the aortic valve (negative pressure behind blood flow sucks anterior leaflet). "preload ! #amount of obstruction (#systolic murmur intensity).

Do not give digitalis. & blocker or Ca channel blocker are good.

- Restrictive cardiomyopathy: filling problem of the ventricle.

Endocardial fibroelastosis most common disease producing it in children and most common reason for a child to get a heart translation (will die otherwise).

Other reasons: Pompe's disease, iron overload, amyloid (from RA for example).

- Cardiac myxoma: 85% in LA, 15% in RA. Benign, moveable (can block mitral valve orifice ! syncope), can embolize. Cause fever, neurological deficits.
- Most common benign cardiac tumor in **adults**. Diagnosis by TEUS of LA.
- Most common benign cardiac tumor in **kids** in rhabdomyoma (**associated with tuberous sclerosis**).
- Pericardial effusion: water bottle configuration on X-ray. **Beck's triad**: muffled heart sounds, **on inspiration** - neck vein distension (Kussmaul sign, normally collapse), pulse magnitude decreases (pulsus paradoxus), BP fall by 10mmHg. Diagnosis: echo cardiogram. Most commonly due to pericarditis.
- Any young women with unexplained pleural and pericardial effusion has SLE until proven otherwise.
- Constrivctive pericarditis: most common due to TB (3rd world countries), previous cardiac surgery (USA). Thick pericardium (no fluid)! on inspiration, heart fills up! hit the wall and make a pericardial knock. Dystrophic calcification on X-ray.

RESPIRATORY:

- Ventilation is better on apex, perfusion is better on lower lobes. Most infarcts are on the lower lobes, re-activation TB is in the apex.
- Aa gradient ~ 5mmHg, increase as we get older but not much.
- Aa gradient > 30mmHg! positive predictive value (**must** have a problem) Increased in **1°** lung disease (ventilation defects, perfusion defects, diffusion defects, PE). Extrapulmonary hypoxic diseases (respiratory center depression, upper airway obstruction, diaphragm paralysis) do not increase the gradient.

- Alveolar oxygen = 150 - pCO2/0.8 = 100, in normal situations.
- Nasal polyps: allergic (**not in kids**), or triad asthma (aspirin sensitive asthma. Presented as a woman with fibromyalgia or chronic headaches, because she's taking a lot of NSAID for the pain).
- Allergic kids with a nasal polyp, do not have allergic polyp, they probably have CF !
- perform a sweat test as first step of management.
- False vocal cords (upper) are covered by squamous epithelium, true vocal cords (lower) are covered by ciliated pseudostartified columnar epithelium.
- Most common causes of laryngeal carcinoma: #1: smoking. #2: alcohol. Synergism effect - if use both, there's a much greater risk to develop any SCC of the esophagus, larynx and mouth. Most common symptom is hoarseness.
- **Epiglottitis** with inspiratory stridor is most commonly caused by H. influenza. **Tracheal** inflammation with inspiratory stridor ! Croup (parainfluenza virus) Both produce upper airway obstruction.
- Hyaline membrane disease (IRDS): surfactant deficiency! massive atelectasis. Massive ventilation defect (massive intrapulmonary shunt), perfusion is intact. Causes: pre-maturity (before 32 weeks), mom's diabetes (**hyper**glycemia of baby ! insulin release ! #synthesis of surfactant), C-section (stress is **missing!** #ACTH + cortisol on the way out).

Mom with diabetes - macrosomia of the baby due to insulin which "adipose + muscle mass. Also **hypo**glycemia at birth. Glucocorticoids (give mom), thyroxin, prolactin - stimulate surfactant synthesis. Commonly have PDA because of hypoxemia ! Machinery murmur.

PEEP therapy (positive end expiratory pressure) + surfactant treatment.

- Surfactant is produced in the lamellar bodies of type 2 pneumocytes.
- **ARDS: septic shock** is the most common cause ! 24 hours - dyspnea due to **ARDS**

48 hours - bleeding from every orifice due to **DIC**.

Neutrophils get into the lund and destroy all the cells! # Surfactant ! collapse. Neutrophils cause a leaky (pulmonary) capillary syndrome! protein, fibrinogen gets into! hyaline membrane.

- Pneumothorax: **spontaneous** - most commonly due to ruptured sub-pleural bleb.
- Lung collapse! diaphragm goes up on that side, tracheal deviation to the **same side** of collapse. Tall thin patients. Scuba divers can get it from going up too fast.

Tension – most commonly due to knife injury/GSW to lung. Tear produced (not a hole)! air goes into pleural cavity (flap open on inspiration) and stays there (flap close on expiration). Increase in pleural pressure pushes the mediastinum (including SVC, RV, RA) and lung to the **other side**! compression atelectasis, compromise blood return to the heart and breathing, diaphragm goes down.

Pneumonia: Community acquired – typical: sudden onset, Strep. Pneumoniae. Pus in alveoli ! consolidation, micro abscesses, productive cough.

Consolidation signs - #percussion, "tectile fremitus, E to A sign - egophony (patients says E, you hear A with stethoscope), whispering pectoriloquy (patients whisper, you hear it very loud with stethoscope). Treatment - Penicillin G.

Atypical: slow and insidious onset, #1: Mycoplasma Pneumoniae, #2: Chlamydia Pneumoniae. Interstitial pneumonia, no pus in alveoli, no signs of consolidation.

Relatively no productive cough, not high fever.

Nosocomial - E. Coli, Pseudomonas Aeruginosa, Staph. Aureus.

- Pleural effusion - **only** percussion.

<u>Viruses + bacteria</u>:

- Rhinovirus is the most common cause for the common cold.
- RSV is the most common cause for bronchiolitis! whizzing. Most common cause of pneumonia in **children.**
- Influenza: antigenic shift – change completely, NA or hemagglutinin change (need new vaccine). Antigenic drift - minor mutation. Vaccine is against influenza **A**.
- Chlamydia Psittaci – people who works with birds, parrots, turkey.
- Chlamydia trachomatis – whizzing a **week after birth**, "A-P diameter, no fever,
- **conjunctivitis**, staccato cough. Caused by infective cervix of the mom.
- Most common cause of conjunctivitis on the 2nd week is C. Trachomatis Most common overall cause of conjunctivitis is erythromycin drops.

- Pseudomonas – water loving bacteria (respirators), productive cough with green cod discoloration.
- Klebsiella Pneumoniae – common in **alcoholics**, high spiking fever, productive cough of mucoid appearing sputum. Can cause **cavitations** in upper lobe.
- Legionella – atypical pneumonia, unproductive cough, **very** sick. Water loving bacteria (water cooler, mists in grocery stores/restaurants).
- **Hyponatremia** (interstitial nephritis, damages JGA ! #renin, # aldosterone).

Fungus:
Candida – From indwelling catheters (subclavian) ! candida sepsis.
Midwest (Ohio) - Histoplasmosis (**tiny** yeast - starlings, bats, cave explorers)
NY - Cryptococcus (pigeons)
Southeast - Blastomycosis (**large** yeast – Skin, lung infections)
Southwest – Coccidioides mycosis (**spherule** with endospore - In dust, caves).

- Actinomycin is the treatment for both Histoplasmosis and Cryptococcus (both related to **bridges** which have both pigeons and starlings)
- Histoplasmosis is the only systemic fungus that have yeast form **in MP**.
- **B**lastomycosis - **b**road **b**ased **b**uds
- Aspergillus - likes to inhabit TB cavity (fungus ball = aspergilloma, common cause of massive hemoptysis), vessel invader (! thrombosis, infarction), allergy to the molds (instrinsic asthma). Corona, **septated**, budding, **narrow** angles.
- Mucor mycosis - **nonseptated**, **wide** angles.
- Pneumocystis - most common AIDS defining lesion (CD count < 200).
- Prophylaxis with trimethoprim/sulfamethoxazole. "Ping pong ball" look under silver stain. Foamy bubbly alveolar infiltrate, dyspnea. Not just lungs, lymph nodes and more.
- Silver stain is used for - Bordetella, Legionella, Pneumocystis.
- Toxoplasmosis - most common cause of **space occupying lesion** (brain) in AIDS. Described as "ring enhancing lesion". Same treatment as for Pneumocystic.
- 1° TB - upper part of lower lobe, lower part of upper lobe. Ghon focus/complex. Reactivation - apex, cavitary lesion.

Diagnosis of TB: acid fast staining which stains mycolic acid.

- Cavitation of upper lobe: Histoplasmosis, SCC of the lung, Klebsiella.
- Foreign body: **standing** - posterior basal segment of the right lower lobe

Lying on the **back** - superior segment of right lower lobe.
Lying on **right** side - middle lobe or posterior segment of right upper lobe
Lying on **left** side - lingula.

- Most common cause of an abscess (aerobes + anaerobes) in the lung is aspiration of oropharyngeal material. Common in homeless. Fluid cavity on X-ray.
- Also from pneumonia (Staph. Aureus, Klebsiella), but less common.
- PE: can be **little** ones (! wedge shaped hemorrhagic infarction if you have underlying lung disease) or **huge** one (saddle embolus ! knocks off orifices of the pulmonary arteries, if it blocks 3 out of 5 ! immediate death).
- Most originate from femoral vein.
- Screening test of choice: ventilation-perfusion scan (have ventilation, no perfusion), and confirm it with pulmonary angiogram.
- Deep veins of lower legs are the most common site of thrombosis but **not emboli**.

Restrictive lung disease: restriction in filling up the lung with air (fibrosis).
#compliance (filling term), "elasticity (expiration term), all volumes#
#FEV1 (normal is 4 liters, here 3), #FVC (normally 5, here 3), **"FEV1/FVC**
(normally 0.8, here 1).
Pneumoconiosis: coal worker's - anthracotic pigment which sets off a fibrotic reaction in the lung. Increase incident of TB, not cancer.
Silicosis - sand, rock, dust related. Big nodules, hard as rock (looks like metastases). Increase incident of TB, not cancer.
Caplan's syndrome - rheumatoid nodules of rheumatoid arthritis (like on the arm) in the lung + pneumoconiosis.

Asbestos - roofer, shipyard. ferruginous body = asbestos body (iron coated fiber). Most common pulmonary lesion associated with it is fibrous plaque of the pleura.
The most common cancer associated with it is: #1: 1° lung cancer,
#2: mesothelioma. If you **also smoke**, there's a incredibly higher chance of getting 1° lung cancer. There is **no** equivalent relationship with mesothelioma.
Sarcoidosis: non-caseating granulomatous disease that has no connection to infection. No known cause. Lung always involved (interstitial fibrosis).
More common in blacks. Bilateral hilar node enlargement. Face + neck involvement: uveitis (uveal tract ! blurry vision), salivary or lacrimal gland enlargement. Diagnosis of exclusion (TB, histo). Steroid treatment.
ACE is very high (granulomas have it), hypercalcemia (epitheloid cells synthesize 1-(-
hydroxylase ! hyper Vit D). Most common non-infectious cause of granulomatous hepatitis (2nd - pneumoconiosis).

- Hypersensitivity pneumonitis: **Farmer's lung** - Thermophilic Actinomycetes. **Sitophilus disease** - also in farmers. Fermented into NO2 ! wheezing, dyspnea. **Byssinosis** - textile industry. Sick all week, better on weekends.
- Good pasture - starts in lungs (restrictive, hemoptysis), ends in kidneys.
- COPD: no problem getting air in, problem getting air out. Elastic tissue support is destroyed. Can't get all the air out ! "Residual volume, "TLC ! diaphragm depressed, increased A-P diameter ! #tidal volume, #vital capacity. FEV1 (1 liter), #FVC (3 liters),**! #!FEV1/FVC** (0.33).
- Chronic bronchitis: clinical diagnosis - patient has cough 3 months out of a year for 2 consecutive years. Disease of **terminal** bronchioles (also for asthma, bronchiolitis), proximal to that - mucus gland hypertrophy.

Ventilation-perfusion **mismatch** ! can't get rid of CO2 due to mucus plugs in the terminal bronchioles ! Blue Bloaters (cyanotic).

- Trapped air on X-ray - can be due to bronchiolitis in little kids (RSV) or new born with chlamydia Trachomatis or emphysema.
- Emphysema: respiratory unit disease (where you can exchange gas, you can't exchange in the terminal bronchioles). Also destroy the vasculature associated with it! **even loss** of ventilation + perfusion! no CO2 retention! pink puffers. **Centrolobular** - most associated with smoking. **Upper** lobe emphysema. Primary portion of the respiratory unit that gets ruined is the **respiratory** bronchioles.

High amount of neutrophils (smoking is chemotactic to neutrophils), not enough (-1- antitrypsin (acquired deficiency, smoking denature it).
Panacinar - **entire** respiratory unit is destroyed. **Lower** lobe emphysema. No (-1-antitrypsin at all (AR, liver doesn't make it).
Smokers can get cetrolobular emphysema on upper lobe and panacinar emphysema on the lower lobe.
Bronchiectasis: bronchi extending to the pleura (further than the hyaline). Infection! destruction of elastic tissue support ! dilatation of airways ! fill up with pus. Productive cough, "cup full" of pus. CF is the most common cause in the US. In 3rd world countries it's TB.

- Immotile cilia syndrome = Kartagener syndrome (absent **dynein** arm ! all places with cilia are effected ! sinusitis, bronchiectasis, infertility (fallopian tube needs cilia to carry the egg, sperm needs cilia for tail), organs being located on the other side (dextrocardia) or organ shifts.
- Asthma: **extrinsic** (type 1 H-S), **intrinsic** (chemical involvement like NSAID - triad
- asthma, exertional asthma, cold temperature). Inflammation of **terminal** bronchioles due to LTC/D/E4 + PG ! narrowing ! wheezing.
- Cancers: **centrally** (highest association with smoking) - SCC, small CC. **Peripherally** - adenocarcinoma (most common): 4 types, 1 has smoking relation, the rest don't (bronchiolo-alveolar carcinoma, large CC).
- PAP smear (for cytological specimens) - stains carotene bright red ! SCC.
- Small CC: looks like lymphocytes, most malignant, no surgery, only chemo. Neurosecetory granules (S100 antigen), produce ADH, ACTH.
- Bronchio-carcinoid: low grade malignancy, can metastasize, can produce carcinoid syndrome if make enough serotonin (no need to metastasize).
- Most common cancer of the lung is metastases. Most commonly from breast.
- Pancoast tumor: posterior upper lobe, usually SCC. Invade the lower parts of the brachial plexus and superior cervical ganglion ! Horner's syndrome (sup. sulcus syndrome): lid lag (ptosis), no sweating (anhidrosis), pupil

contraction (miosis).

GI:

- Plummer-Vinson syndrome: iron deficiency anemia, dysphagia, koilonychia, esophageal web, and atrophic glossitis. Premalignant (SCC of the cricopharyngeal region).
- Dysphagia - Solid: obstruction (PVS, cancer).
- Both: peristalsis (myesthesia gravis in upper one third of esophagus or scleroderma (PSS)/CREST/achalsia in lower esophagus).
- Achalsia: vomit when they go to bed at night.
- Candida esophagitis is the most common cause of odynophagia in AIDS patients (It's AIDS defining when it's in the esophagus).
- Tracheo-esophageal fistulae (proximal is blind end, distal from trachea) or duodenal atresia of the baby cause Polyhydramnios for the mom.
- **VATER** association: **V**ertebral anomalies, **A**nal malformations, **T**racheo-**E**sophageal fistulae/atresia, **R**adial and **R**enal anomalies.
- Achlasia: ganglion cells are destroyed! damages movement (peristalsis) of LES + reduce VIP levels (VIP relaxes the LES)! constant constriction of the LES.
- Chagas disease (Reduviid bug = kissing bug): AQUIRED achalasia (megaesophagus) and AQUIRED Hirschsprung (megacolon).
- Other clinical features: Romana sign, myocarditis, CHF, DCM.
- Distal esophagus = Adenocarcinoma, middle esophagus = SCC.
- Left gastric vein (branch of portal vein) drains distal esophagus and proximal stomach ! responsible for esophageal varices in portal hypertension.
- Mallory-Weiss syndrome: tear in the lower esophagus or cardia from prolonged vomiting.
- Boerhaave's syndrome: spontaneous rupture/puncture of a non-diseased esophagus from vigorous vomiting. Respiratory symptoms.
- Both usually caused by Bulimia or alcoholic patient with retching (vomiting without vomit)
- Congenital pyloric stenosis: **non bile stained** vomit a few weeks **after birth**, hyperperistalsis, and right upper quadrant mass. Pyloroplasty treatment.
- Duodenal atresia: "Double bubble" sign - one in stomach, one in proximal duodenum (air trapped bubble). **Bile stained** vomit **at birth**.
- H. pylori (comma shaped): produces urease (makes ammonia) and cytokines. Serology is good for first diagnosis but doesn't help for recurrent episodes. Cause atrophic gastritis in the pylorus and antrum.
- Most gastric cancers are along the lesser curvature of the pylorus and antrum (like gastric ulcers). Most common cause is H. Pylori (also cause gastric lymphoma)
- Pernicious anemia (parietal cells) is in the Body and Fundus.
- Duodenal ulcer is **never** malignant (never biopsy). Gastric ulcer **may** be.
- Melena: upper GI bleed, black stool due to conversation of Hb to hematin.
- Stress ulcer (usually duodenal): severe epigastric pain radiates to left shoulder (same dermatome, referred pain) from irritated diaphragm, because of air coming out from perforated ulcer. Can see air under diaphragm.
- Dermatitis Herpetiformis has a **100% association** with Celiac Disease.
- Foamy macrophages in the lamina propria ! Whipple Disease.

In an HIV patient, we should suspect Mycobacterium Avium-Intracellulare which produces a whipple LIKE syndrome.

- Alcoholics have malabsorption for two reasons: chr. pancreatitis (lipase def.) and/or cirrhosis (bile salt def.).
- Fecal smear for leukocytes ! positive for neutrophils ! take a culture to identify micro organism ! suggest invasive diarrhea (**low** volume diarrhea) and **not** secretory or osmotic (**high** volume diarrhea).
- Lactase def. = disaccharidase enzyme def. = brush border enzyme def.
- Traveler's Diarrhea = ETEC
- Fluid replacement for Cholera patients must include glucose (for the Na-Glc co- transporter)
- ETEC & Cholera are NON invasive (bowel biopsy is normal, no inflammation), just a toxin stimulating a pump.
- Camplyobacter Jejuni is the #1 cause of diarrhea (coma shape).

- Giardia lamblia is the #1 parasitic cause of chr. diarrhea (metronidazole treatment).
- Cryptosporidium parvum is the most common organism associated with AIDS diarrhea (partially acid fast).
- Shigella, C. jejuni, C. difficille can all produce a pseudomembrane.
- #1: Ampicillin, #2: Clyndamicin cause pseudomembranous colitis (diagnosis: toxin assay of stool, treatment: metronidazole, used to be vancomycin).
- Colicky pain (with pain free intervals) = **TOTAL obstruction** of the small bowel.
- Obstipation (complete intestinal obstruction) = constipation + not passing gas.
- Down syndrome, GI related: duodenal atresia and Hirschsprung disease (**no stool in rectal ampulla**)
- Adhesion (from previous surgery) and indirect inguinal hernia (no history of surgery) are the two major reasons for colicky pain (obstruction).
- Intussusception (terminal ileum goes into the cecum): bloody stool, colicky pain, young child, Dance sign (mass in right upper quadrant)
- Gallstone Ileus: fistulae (between gallbladder and small bowel), colicky pain, ileuo- cecal (usually) obstruction, older people, air in billiary tree.
- Cystic fibrosis: meconium ileus.
- Small bowel (**single** blood supply) infarcts (**diffuse** abdominal pain) are more common than the large bowel (**double** blood supply) infarct (**localized** pain).
- Ischemic colitis = localized pain (e.g splenic flexure) + bloody diarrhea.
- Most common cause of hematochezia (bloody stool): #1: diverticulosis, #2: angiodysplsia (related to aortic stenosis & Von Willebrand disease).
- Meckel's diverticulum is persistence of the **vitelline duct**. 2 feet from ileuocecal junction, 2 inches long, 2% of population.

Most common complication of is bleeding (! hematemsis, hematochezia). Also: right lower quadrant pain, diverticulitis.

- Sigmoid colon is the most common location for GI cancer, hemartoma, polyps (into the lumen) and diverticuli (out of the lumen).
- Most common complication of diverticulosis is diverticulitis ("left sided appendicitis": pain, fever, neutrophilic leukocytosis, rebound).
- Most common fistulae are the colo-vesical fistulae (causes pneumaturia).
- Fistulae can rupture and cause peritonitis.
- Crohn's disease involves terminal **ileum** 80% of times. It doesn't cause hematemesis. Produces **fistulae** in anus. **Transmural**. **Skip** lesions, segmental. Colicky right lower quadrant pain with diarrhea in a young person (TB in 3rd world country). Cobble stone (fissuring) appearance, linear ulcers. Non caseating **granuloma**.
- UC mainly in **rectum** (always begin there). Produces bloody diarrhea. **Mucosa + sub mucosa**. No Skip lesions. **Pseudopolyps** (residual inflamed bloody mucus). High association with cancer. Most common cause of **primary sclerosing cholangitis** (around common bile duct) ! obstructive jaundice, cholengial carcinoma.
- Tubular adenoma (precursor lesion of colon cancer) = "strawberry on a stick".
- Mass coming out of the butt: in children – juvenile polyp (hemartoma, **not** pre- cancerous), in adult – prolapsed internal hemorrhoids.
- **Internal** hemorrhoids bleed, **not** painful, prolapse.

External hemorrhoids thrombosis and **painful**.

- Villous adenoma has the greatest malignant potential (50% chance), secretes mucus, seen on stool. Tubular adenoma are precursors also, dangerous over 2 cm.
- Familial polyposis is characterized by over a 100 polyps. Autosomal dominant, APC involved. **Always** get cancer (age 35-40), prophylactic removal of bowel.
- Autosomal dominant diseases are characterized by late manifestations, penetrance, and variable expressivity.
- Turcot's syndrome = polyposis coli + brain tumors (autosomal recessive).
- Gardner's syndrome = polyposis coli + soft tissue and bony tumors.
- All carcinoid tumors are malignant but have low grade potential (depend on **size**! greater than 2 cm! metastasize).

Most common location that **cause** carcinoid syndrome is terminal ileum (>2cm). Most common location that **doesnt because** it is tip of the appendix (yellow, <2cm).

- Carcinoid tumors produce serotonin (metabolized by liver). Hepatic metastasis !

Escapes metabolism ! #1: flushing, #2: diarrhea.
Also: tricuspid insufficiency, pulmonary stenosis (TIPS). Tryptophan def. (use it to make serotonin) ! niacin def. ! pellagra (diarrhea, dermatitis, and dementia).

- Colon caner: **left** side obstructs (! constipation, diarrhea), **right** side bleeds (! iron def.).
- CEA used to follow for recurrence of colon cancer, not for diagnosis.
- Pathogenesis of acute diverticulitis and acute appendicitis (fecolith) and acute cholecystitis (stone) are the same: pressure ! ischemia ! E. coli invasion ! inflammation.
- Most common cause of acute appendicitis in children is measles or adenovirus.

Liver:

- Urobillin (oxidized urobilinogen) gives the color to both urine and feces.
- Unconjugated hyperbilirubinemia (<20% conjugated), hepatitis (20-50%), conjugated hyperbilirubinemia (>50%, obstruction, light stool + dark urine).
- Gilbert's disease: autosomal dominant, uptake failure and/or conjugation failure. Jaundice appears only after 24 hour fasting (bilirubin doubles in blood).
- Most common cause of Jaundice: #1: Hepatitis A, #2: Gilbert.
- Dubin-Johnson (**black** color pigment in **liver**), Rotor: Autosomal recessive. Defective excretion of conjugated bilirubin.
- ALT (more specific), AST (also RBC, muscle) elevated, PT elevated, albumin decreased in diffuse liver necrosis.
- Alcoholic liver disease: **AST** (mitochondria) > ALT (cytosol), **(GT#**
- Viral hepatitis: **ALT** > AST.
- Obstruction: alkaline phosphates (also bone, placenta),)GT (synthesized in sER), 5 nucleatidase (less important) elevated. ALT, AST elevated but to lesser degree.
- Hepatitis A, B, C, D, E – common at that order (A - most common, so forth).
- Hepatitis A can never become chronic (E only chronic in pregnancy).
- Anti HAV IgM - have it, anti HAV IgG - **had** it, protective. Anti HCV IgG - have it, anti HDV IgG - have it.
- Protective - anti HAV IgG, anti HBV **surface** antibody, anti HEV IgG.
- Hepatitis B markers by order of appearance: **1.** S antigen (asymptomatic, last to disappear), **2.** E antigen + HBV DNA (both: only **infective** ones, disappear first), **3.** Core antibody IgM (only marker during window period: not infective, **had** it, during recovery. **Becomes IgG** later on), **4.** Surface antibody (about a month after surface antigen is gone).
- Acute Hepatitis B: S antigen, E antigen, HBV DNA, core antibody IgM.
- Vaccination = only surface **antibody**
- Recovered from disease = surface antibody, core **IgG**
- Chronic hepatitis = Surface antigen over 6 months.
- Infective = S antigen, E antigen, HBV DNA.
- Healthy carrier = surface antigen, core **IgM**.
- (IFN therapy for infective patients (good chance of full recovery), **NEVER** give corticosteroids for viral hepatitis.
- Entamoeba histolytica: resistant to acid, ex cyst in cecum (alkaline), produce chemical that drills holes in mucosa ! ulcer, bloody diarrhea, can penetrate liver and cause abscess (also in lung, brain). Trophozoites **contain RBC**. Metronidazole treatment.
- Echinicoccus multi/unilocularis (Ship herder's disease): Definitive host (dog) – has sexually active worms, can lay eggs (develop to larvae). Intermediate host (sheep, human) – only larvae (end stage in intermediate, can become adult in definite). If cyst rupture and fluid gets to abdominal cavity ! anaphylactic shock.
- Taenia Solium: **1.** Larvae in pig (intermediate host), eaten by human (definite host), develops to adult. **2.** Eggs eaten by human (intermediate host) develop into larvae = cysticerci ! cysticercosis (eye, brain cyst which calcify ! seizures).
- Most common complication of corticosteroid treatment is cataract.
- Nutmeg liver (big & congested) is a consequence of right sided HF

- Portal vein thrombosis! portal hypertension, ascites, varices, **NO** nutmeg liver (since it's a pre hepatic).
- Budd Chiari syndrome (heptic vein thrombosis): #1: polycythemia vera, #2: oral contraceptives. Can cause Nutmeg liver (post hepatic), death with no surgery.
- Fatty change (alcohol) is reversible. Alcohol hepatitis results in death if consumption is not stopped. Mallory bodies appear in both.
- Acetaldehyde-protein complex stimulate Ito cells (normally stores Vitamin A) to make collagen ! cirrhosis.
- Cholestasis: deep green liver (from bile backflow), light stool, dark yellow urine (from conjugated bili), hypercholesteremia, itching (bile salt deposit), AP",)GT".
- Primary biliary cirrhosis causes **late** jaundice because of triad reserve. Anti mitochondrial antibody for diagnosis.
- (Hashimoto thiroiditis – anti microsomal antibody for diagnosis)
- OC + anabolic steroids have same effect on liver - intrahepatic cholestasis (! jaundice), hepatic adenoma (may rupture ! intraperitoneal hemorrhage).
- Pregnancy jaundice (due to estrogen effect) disappears after pregnancy.
- Intraperitoneal hemorrhage during pregnancy can be caused by ruptured ectopic pregnancy or ruptured hepatic adenoma (caused by OC taken before pregnany).

GYN:

- Hirsutism - excess of hair in normal hair bearing areas.

Virilization - hirsutism + male2nd sex charectristics (acne, deeper voice, cliteromegaly). Spironolactone can **treat** hirsutism, can **cause** gynecomastia.
Most testosterone in a woman is from the ovary. DHT-sulfate (androgen) is mostly from the adrenal. If we check both levels, we can determine the hirsutism origin: " DHT-sulfate! andreno-genital sysdrome, cushing. "Testosterone! polycystic ovarian syndrome, ovarian stromal hyperplasia, ovarian tumor.

- **PCOS:** FSH suppressed ! "LH ! 17-keto-steroids synthsis (DHEA, androstenedione) around the developing follicle ! converted into testosterone ! goes into granulosa cells where aromatase is presented ! estradiol ! hirsutism. Aromatase also present in adipose ! obese women produce estrogen there. "estrogen ! risk of andometrial hyperplasia and carcinoma ! #FSH, "LH. Can break this cycle with OC since it has progesterone to inhibit LH. **!FSH**, "aromatase activity ! follicle degenerate, cystic space where it used to be. Can be felt sometimes by rectal exam or seen with US.
- **Dysmenorrhea: Primary** - due to "PGF!" uterine contraction.

Secondary - due to endometriosis.
Dysfunctional uterine bleeding: not related to organic or anatomical cause (endometrial polyp or cancer). Hormone imbalance.
3 causes: anovulatory cycles (most common in women from menarche to 20 years. Due to "estrogen, #progesterone! endometrial hyperplasia ! sloughed off ! bleeding), inadequate luteal phase, irregular shedding of the endometrium.
Amenorrhea: primary, secondary. Hypothalamus-pituitary problem, ovarian problem,
end organ problem (menses is fine, anatomical reason - no vagina, hymen not perforated, cervical stenosis + stenosis - Asherman's syndrome, from injury). First step of diagnosis of amenorrhea is **pregnancy test**.
FSH, LH levels: high - hypothalamus-pituitary, low - ovarian, normal - end organ.

- Turner's syndrome (XO): diagnosis at birth by physical exam - defects in lymphatics! sweeling of hands and feet in newborn female (lymphedema).
- 4th metacarpal has a dimple, instead of a knuckle when you make a fist ("knuckle, knuckle, dimple, knuckle" sign). Cystic hygroma - dilated lymphatics in neck area ! strech the skin ! webbing of the neck skin. Preductal **coarctaion**, no mental retardation, all their ovarian follicles are gone by age 2 ("streak gonad", susceptible to dysgerminoma), amenorrhea. If mosaic, can be fertile.
- Knuckle, knuckle, dimple, dimple (K-K-D-D) - pseudohypoparathyroidism.
- Adenomyosis - glands and stroma **in** the myometrium. Cause of dysmenorrhea, dyspareunia, menorrhagia. Hysterectomy because uterus is very big.
- Endometriosis - functioning gland and stroma **outside** the uterus. Most common location is ovary ! bleeding ("chocolate cyst"). Other: fallopian tube, Douglas pouch. Pain in defecation **while** having period, gone when period gone.

Theories: reverse menses (endometrial tissue while being sloughed off, reverse through fallopian tubes and spread), surface epithelium in peritoneum metaplasticly make endometrial mucosa, hematogenous-lymphatic spread.

- Endometrial hyperplasia - **unopposed estrogen** (PCOS, early menarche, late menopause, obesity). Most common cause of endomaterial cancer.
- Pouch of Douglas: painful defecation in endometriosis, collect seeding in ovarian cancer, collect pus in PID, collect clotted blood in ruptured ectopic pregnancy.
- Obesity (associated with DM-II): "risk of breast, ovarian, endometrial cancer.
  Age: **45** - cervical, **55** (post menopausal) - endometrial, **65** - ovarian.
- Any women whose been in menopause for over a year and has bleeding, has endometrial cancer until proven otherwise. Do endometrial biopsy.
- Any women over 55 with palpable ovaries, have cancer until proven otherwise.
- Leiomyoma is not a precursor of leiomyosarcoma.
- Ectopic pregnancy - sudden onset of lower abdominal pain. Do pregnancy test.
- Ovarian masses: **surface derived** tumors (lining of the ovary) - serous cystadenoma, serous cystadenocarcinoma - most common benign and malignant tumors of ovary respectively, most common bilateral tumors. Adenocarcinoma has psammoma bodies (apoptosis replaced by dystrophic calcification). **Germ cells** tumors (like in men) - cystic teratoma is the most common germ cell tumor (usually benign). **Sex cords stromal** tumors - granulosa cell tumor (low grade malignancy) produce estrogen (! hyperestronism ! bleeding), sertoli-leydig cell tumor produce androgens, fibroma (Meig's syndrome - fibromyoma, ascites, right sided pleural effusion).
- Men have mainly germ cell tumors.
- Most common cause of ovarian mass in young women is follicular cyst (palpable mass). Cause sudden onset of pain, can rupture ! peritonitis.
- DD of sudden onset of right lower abdominal pain - ruptured ectopic, appendicits, PID,
- ruptured follicular cyst. Do an US, &-hCG.
- Psamomma bodies: papillary carcinoma of the thyroid, meningioma, serous adenocarcinoma of the ovary.
- Signet ring cells in the ovary ! metastases from the stomach (Krukenberg tumor).
- Syncytiotrophoblast (chorionic villi outer layer) produces &-hCG, HPL.
- Hydatidiform moles: **complete** (46 XX, both X from dad), **partial** (69, can have fetus present). Benign tumors of chorionic villi.
- Causes of choriocarcinoma: 50% - complete mole, 25% - spontaneous abortion, 25%
- normal pregnancy. Malignancy of the trophoblastic tissue (no villi). Metastases to lung, responds wonderfully to chemotherphy.
- **Nipple!** Paget's disease.

Lactiferous ducts ! intraductal papilloma (most common cause of bloody nipple discharge in women under 50).
Major ducts ! most breast cancer (invasive ductal, medually, mucinous)
Terminal lobules ! lobular cancer (**bilateral**), not picked up by mammograpy.
Most common cause of a breast mass in a woman **under** 50 is fibrocystic change.
Most common cause of a breast mass in a women **over** 50 is cancer (**infiltrating** ductal carcinoma ! late diagnosis).
Most common cause of a moveable breast mass in a women under 35 is
fibroadenoma (cycle progression).

- Fibrocystic change: lumpy bumpy feel, painful (estrogen sensitive, worst as the cycle goes on), ductal hyperplasia (estrogen sensitive epithelial cells), sclerosing adenosis in terminal lobules.
- Fibroadenoma: neoplastic component is the stroma. Very common. Still perform needle biopsy ! if positive, take it out.
- Invasive cancer: nipple sucked down, very hard. When cancer invades stroma !
- fibro+elastic tissue response ! makes it palpable mass, **painless**. Stellate appearing whitish mass, density on mammograpy, calcification.
- **Painful**, under 50 - inflammatory lesion (fat necrosis)
- Outer quadrant is the most common location (most breast tissue is there). 2nd most common is around the aerola.
- First step in management of a palpable mass in the breast is FNA (gives diagnosis and can tell whether it's solid or cystic. US only gives the latter).

- First step in management of a cold nodule in the thyroid is FNA.
- Comido carcinoma (zit like): when you cut across, caseous necrosis comes out. erb2 oncogene, aggressive cancer, invasive.
- Indian filing - invasive lobular cancer, infiltrating ductal cancer (more common).
- Paget's disease - rash on the nipple, cancer of the duct underneath that spread to the skin.
- Inflammatory carcinoma: **worst**. Dimpled skin because the lymphatics are plugged with cancer ! leaks out ! peau d'orange.
- Winged scapula (cutting the **long thoracic nerve**) is the most common complication
- of modified mastectomy. Lumpectomy - removing underlining tumor with a border and take nodes for staging, then do radiation (same prognosis as modified mastectomy but saving the breast, good if fits the criteria).
- Estrogen/progesterone receptor essay: **young** women have ERA, PRA negative because estrogen levels are high and there's down regulation of receptor.

Tumor responding to estrogen (**older** women, ERA positive) ! give tamoxifen (weak estrogen) hooks into the receptor, so estrogen can't. Side effects: menopausal type symptoms, "risk of endometrial cancer, prevent osteoporosis.

Endocrinology:

- Most reasons for over activity, **cannot** be suppressed. Exceptions: prolactinoma (bromocryptin - dopamine analogue, suppresses it), pituitary cushing (high dose dexamethasone suppresses it).
- #cortisol, which is **not** increased by ACTH (checked by 17-hydroxycorticoids in the urine) ! Addison's disease. If does increase ! hypopituitarism.
- Hypopituitarism: most common causes in **adults** are #1: pituitary adenoma,
- #2: post partum couagulation necrosis (ischemia due to hypotensive episode during delievery) = Sheehan's syndrome. Sudden breast milk stops.

In **children**, craniopharyngioma is the most common cause. It is suprasellar, goes forward and damages the optic chiasm ! bitemporal hemianopsia (visual defects)

- Decrease of hormones is in specific succession: gonadotropins (amenorrhea, impotence) ! GH (**adult** - muscle mass loss, fasting hypoglycemia, **child** - dwarfism) ! TSH (hypothyroidism) ! ACTH (hypocortisolism - fatigue, fasting hypoglycemia) ! prolactin (in non pregnant - you won't notice)
- GH is mostly released aroung 5AM, so **sleep** is the best stimulation test (check IGF-1). Arginine, lysine stimulate GH.
- Diabetes insipidus: polyurea, polydipsia. **Central** - lacking ADH (car accident, sever your stalk ! initially only DI, later complete hypopituitarism).

Nephrogenic – have ADH, doesn't work.

Restrict water – normal: plasma osmolality goes up to 290, urine - 750. abnormal: plasma ~ 315 (hypernatremia), urine ~ 100. To differ we give ADH, if increase over 50% ! central, if not ! nephrogenic.

- Cheapest way to screen acromegaly is through an **old picture**. Gigantism - GH, IGF! linear growth (death of cardiomyopathy).

Acromegaly - epiphysis closed so only wide growth (frontal lobe, hands, feet)

- Causes for galactorrhea (only women) - OC, hydralazine, Ca channel blockers, psychotropic drugs, 1° hypothyroidism ("TRH ! stimulates prolactin, used as a test). Prolcatin > 200 ! prolactinoma. Nipple stimulation (**bra**!) can cause it. 2° Amenorrhea, because prolactin inhibits GnRH (temporary birth control…)

Thyroid: TSH is the most important screening.

Estrogen increases TBG (thyroid), transcortin (cortisol) ! "T4, normal TSH (free hormone levels are normal), "cortisol, normal ACTH (normal free cortisol levels). Anabolic steroids (need AA supplements for it to work) decrease TBG ! #T4, normal TSH.

- **I-131** uptake test: hyperthyroidism (Grave's) ! increase uptake. Excess oral thyroid hormone to lose weight ! decrease uptake (gland atrophy).
- **Midline cyst** - thyroglossal cyst, **antero-lateral neck** - brachial cleft cyst.
- Grave's disease: exophtalmus (pathognemonic) apathetic, **atrial fibrillation** (any patient with AF, you must take a TSH level). Heat intolerance, sinus tachycardia, diarrhea, **systolic** HT, hypercalcemia ("bone turnover) - all symptoms are catecholamine related (thyrosin !!! NE). Initial treatment: &-blockers (stops all symptom **except** sweating). Later: propylthiouracil. T4", TSH#, I-131 uptake". IgG Ab against TSH receptor ! continued

stimulation (in hashimoto, the IgG Ab inhibits the gland).
Excess of GAG deposition - periorbital edema, horse throat, pretibial mixedema (also in hashimoto).

- Mitral valve prolapse is another disease related to GAG excess. Lysosomal storage diseases are related to GAG decrease.
- Hypothyroidism: muscle weakness ("CK), brittle hair, periorbital edema, coarse skin, mental slowness, delayed Achilles reflex, constipation, **diastolic** HT. #T4, "TSH, #I-131 uptake (usually not done in hypo)
- Thyroid hormone is responsible for brain development after birth (year+).
- Most common cause of goiter is idodine deficiency. Treatment of choice for goiter is thyroxine. **Sudden** increase in size is a hemorrhage from within a cyst/nodule in the goiter.
- Hot nodule: taking up I-131 (black dot in the nodule location, nothing else).
- Cold nodule: not taking up I-131(the nodule is an area of lucensy).

In a **woman** - 15-20% is malignant. Most are cyst, some are adenoma. In **men and children**, it's malignant until proven otherwise.
Any person who was exposed to radiation to neck area with cold nodule ! papillary carcinoma of the thryroid - psammoma bodies, cervical lymph node metastases, good prognosis.

- Follicular carcinoma: hematogenous to bone and lungs (not to lymph nodes)
- Medullary carcinoma - sporadic or AD (MEN syndrome). ret associated with it, calcitonin tumor marker is converted into amyloid. Worst prognosis.
- **Calcium metabolism:** Most common cause of hypocalcemia is hypoalbuminemia. Alkalosis ! #H ! more COO+ groups on albumin ! binds more Ca ! total body Ca normal but ionized Ca is decreased ! #threshold for activating the nerve of the muscle ! easier to activate the muscle ! tetany (Trouseau sign)

#Ca, #PTH ! 1° hypoparathyroidism (previous thyroid surgery) Newborn, cyanosis, irritable ! Di George syndrome.
!Ca, "PTH ! 2° hyperparathyroidism (renal failure)
"Ca, #PTH ! 1° hyperparathyroidism! #P. Mostly asymptomatic, if symptomatic - usually stones. Most common in women, almost always > 50.
#Ca, #PTH ! all other reason for hypercalcemia, usually malignancy (renal adenocarcinoma, SCC of lung, MM, bone metastases - lytic, sarcoidosis).

- Cushing's: purple striae, central obesity, thin extremities.

Most common cause is long term steroid therapy (renal transplant, SLE), when that's excluded: **pituitary**, **adrenal** (lowest ACTH), **ectopic** (highest ACTH).
Screening test: 24 hour urine for free cortisol (not attached to any protein), will differ cushing's (high) from cushingoid.
Dexamethasone (cortisol analogue) suppression test: high dose dexamethasone suppress ACTH release from **pituitary cushing's** (not for other 2 types).
Cortisol is GNGenic, need AA from muscle (thin arms, legs), "glucose ! "insulin ! "fat storage (moon face, buffalo hump, trunkal obesity). Sterch marks due to the obesity, purple because cortisol decreases collagen synthesis.

- Hyperaldosteronism (Cohn's syndrome): HT, hypernatremia, hypokalemia, alkalosis, tetany.
- Adrenal medulla tumors: pheochromocytoma (**adults**, benign), neuroblastoma (**kids**, malignant), both cause HT. Both are neural crest origin.

Unstable HT, anxious, lots of sweat ! check 24 hour urine metanephrin & VMA. Pheochromocytoma: associated with MEN2A, MEN2B, neurofibromatosis.

- Waterhouse-Friderichsen syndrome: caused by Neisseria Menigitidis (most common cause of meningitis in 1month-18 years, only meningitis with petechial lesions). Hypotensive shock (hemorrhagic adrenals ! no cortisol + aldosterone)
- Most common cause of chronic hypocortisolism is Addison's diseae, which is most commonly due to autoimmune disease (used to be miliary TB).

Addison's disease destroys all the adrenal cortex ! "ACTH ! "melanin ! hyperpigmentaion, especially in the mouth.
#Aldosterone ! salt losing ! hyperkalemia ! peak T waves, metabolic acidosis.

- Ambiguous genitalia: first step in management is chromosome analysis to find out genetic sex. Adrenogenital syndrome usually due 21-hydroxylase deficiency.
- **17-keto-corticoids**: androstendione, DHEA (weak androgens)

17-hydroxy-corticoids: 11-deoxy cortisol, cortisol

- 21 hydroxylase deficiency: #mineralcorticoids, #17-hydroxy, "17-keto ! salt losing, hyperpigmentation, **girl** - ambiguous genitalia.
- 11 hydroxylase deficiency: #cortisol, #corticosterone, #aldosterone, "11-deoxy corticosterone, "11-deoxy-cortisol, "17-keto ! **girl** - ambiguous genitalia, **boy** - precocious puberty, salt retainer ! HT.
- 17 hydroxylae deficiency: #17-keto, "17-hydroxy, "mineralocorticoids ! HT, **boy** - no testetosterone ! female external genitalia, **girl** - underdeveloped.
- Islet cell tumors: **ZES** - "gastrin ! peptic ulcers. **Insulinoma** - C-peptide is increased. If you inject insulin ! "insulin, #glucose, C-peptide is suppressed.

Diabetes: type 1 - absolute insulin deficiency, Ab against islet cells (insulitis), ketoacidosis, HLA relationship (means there's a predisposition to develop under the right trigger - coxsackie, mumps, EBV), always have to use insulin.
Type 2 - family history, obesity, hyperosmolar nonketotic coma, amyloid in the islet cells, eventually when get resistant to sulfonylurea - use insulin.
Mechanisms: osmotic damage in tissues with aldose reductase - sorbitol sucks water into the lens, pericytes in retinal vessels become weak ! microaneurysms ! blindness, schwan cells ! peripheral neuropathy.
Non enzymatic glycosilation! basement membrane permeable to proteins, hyaline arteriolosclerosis, diabetic nephropathy, Hb A1C.
Fasting glucose > 126mg/dl on two seperate occasions ! diabetes (used to be 140, so now it's **increased sensitivity**).

- Gestational diabetes - mom didn't have diabetes before pregnancy, now she does.

It is a risk factor for baby to get - RDS, premature delievery. Mom is in increased risk to develop diabetes further on in life.

Musculoskeletal & skin:

- Crystals in synovial fluids can be seen in: **gout** - needle shape (mono-Na urate). **pseudogout** - 2 crystals types, rhomboid & needle shape. " joint space, no erosion. Get a sample of synovial fluid, put a red filter into it which makes the background red, and the crystals blue (east-west direction, parallel to analyzer) ! **pseudogout** or yellow (north-south direction, parallel to analyzer, mono-sodium urate) ! **gout**.
- Arthritis - **Oteoarthritis** (most common): wearing down of articular cartilage. Osteophyte is a reaction to injury from that constant wearing down ! Heberden's node (**DIP** joints), Bouchard's node (**PIP** joints). Worse as day progresses. **Rheumatoid arthritis**: involves the **MCP, PIP** joints. Inflammatory joint disease caused by rheumatoid factor (IgM Ab against IgG) in the synovial fluid ! activate complement, neutrophils come in ! damage the joint ! synovitis ! synovial hyperplasia ! synovial tissue grows over the surface of the articular cartilage (pannus) ! fibrosis and destruction of cartilage ! ankylosed, fixed joints. Usually **symmetric**. Rheumatoid nodules (also in rheumatic fever).

Treatment: MTX (treat early, less severe damage in the long run).

- Sjogren syndrome: rheumatoid arthritis + autoimmune destruction of lacrimal glands, keratoconjunctivitis sicca (dry eyes), dry mouth (swallowing problems). Biopsy of the lower lip (confirmatory test), loking for inflammtoary reaction in the salivary glands. Anti-SSa (Ro), SSb (La).
- Caplan's syndrome: rheumatoid nodules in the lung + pneumoconiosis.
- Felty syndrome: splenomegaly, neutropenia and rheumatoid arthritis.
- **Gout**: big toe ("podagra") is the first joint to be involved, mostly happens at night. Precipitation of mono-Na urate crystals (**gout defining**) ! neutrophils phagocytize it ! release their enzymes ! inflammatory reaction. "uric acid.

Initial treatment (to control inflammation): anti inflammatory like indomethacin (used to be colchicine). Treatment of cause: allopurinol (blocks xanthine oxidase) for **overproduction**, probenecid or sulfinpyrazole for **under excretion** (90%).

- Chronic gout: tophus filled with crystalline material, multinucleated giant cells. It is a mono-Na urate in soft tissues, seen in feet, hand, ear. Erodes joints. Treatment from here on is only allopurinol.
- Multi factorial inheritance (HLA B27 positive) - **Do not** eat red meat, red wine, alcohol (! metabolic acidosis ! more lactic + &-hydroxybutyric acid excretion, less uric acid excretion).
- Sacro-iliac joint (severe lower back pain in the morning, feel better as the day progresses), eventually also vertebral column ("bamboo spine").

Restrict movements of chest cavity (due to hunched back) ! blood gas abnormalities. Aortitis, aortic regurgitation. Uveitis,

iridocyclitis ! blindness.

- Alcaptonuria (AR): degenrative arthritis in vertebral column, cartilage in between vertebrae is black color, urine exposed to light becomes black.

Homogentisate oxidase deficiency ! "homogentisic acid ! black on exposing to light. Destroy cartilage.

- Non specific urethritis Chlamydia: sterile pyurea, dysurea, "frequency. few weeks after treatment ! **sterile** conjunctivitis, pain in **Achilles tendon** (pathognomonic)! Reiter's syndrome (multifactorial, HLA B27 positive), triggered by Chlamydia, (could also be UC, psoriasis, shigella, y. enterocolitica) ! ankylosing spondylitis.
- Disseminated gonococcemia: **STD** (**S**ynovitis, **T**enosynovitis, **D**ermatitis). Disseminate for sure if C5-C9 missing (need it to phagocytize N. Gonorrhea).
- Most common cause of septic arthritis in the US is gonorrhea.
- Lyme's disease (Borrelia Burgdorferi): erythema chronicum migrans (Pathognomonic) at the site of the bite (Ixodes tick). Treat with tetracycline, if not ! chronic: myocarditis, **bilateral** bell's pulsy (facial paresis **pathognomonic**. Herpes - unilateral). Hemolytic anemia due to an intra erythrocytic parasite transmitted by the **same** tick from whitetail deers, causing babesiosis (**eastern seaboard**, 1 week incubation). Treatment for chronic disease is ceftriaxone.
- Osteogenesis imperfecta: defect in synthsis of type 1 collagen, bluish discoloration of the sclera (reflection of the choroidal veins underneath).
- Osteopetrosis (brittle bone disease): defect in osteoclasts ! no BM ! severe anemia, different nerves get caught inside.
- Osteoporosis: Breaking > building bone, because there's not enough estrogen to inhibit IL-1. Both **mineral** + **organic** loss of bone mass. Collapsing of vertebral column ! height loss, kyphosis. Fractures of distal radius, Dowager's hump. Swimming is **not good** (water taking off the stress, we need stress to build bone). Walking and weight training is **good** (put stress on it).

Should: Excercise, get 1500mg of Ca every day, 400-800 units of Vit D, iron. Being in space causes osteoporosis.

Osteomalacia: only **mineralization** problem, the organic part is normal (cartilage, osteoid).

- Most common bone tumor is osteochondroma (neoplasm of cartilage capped by bone on the surface). Ollier's disease - have enchondromas all over the body ! "risk to develop chondrosarcoma (most common malignant tumor).
- Osteogenic sarcoma - distal femur, proximal tibia (knee area pain), early 20s.
- Develops in the **metaphysis** of bone, invades muscle + periosteom (lifting on it, Codman's trianlge on X-ray), "sunburst" appearance. Rb, chr. 13.
- Duchenne muscular dystrophy (X-linked): **absence** of dystrophin. "CK, "LDH. Gowers' maneuver in children (when trying to stand, begins with both hands and feet on the floor, then works his way up the legs with his hands).

Pseudohypertrophy of the sural region (enlarged, weak calves).

- Becker's muscular dystrophy (X-linked): make **abnormal** dystrophin.
- Most common cause of HCC in children is (-1-antitrypsin deficiency.
- Myotonic dystrophy (AD, chr. 19): most common **adult** muscle dystrophy. Trinucleotide repeat (like Huntington, Fragile-X, Friedreich's ataxia) - **anticipation**

(becomes worse with every generation). Can't relax their muscle grip, diabetes, cardiac abnormality, hanging jaw, cataract, dementia, baldness.

- Fragile X: mental retardation, macroorchidism, mitral valve prolapse.
- Myasthenia gravis: IgG Ab against Ach receptor ! progressive muscle weakness ! lid lag, eye muscles (double vision), dysphagia to liquids + solids. Feel good in the morning, get worse as the day goes on. Treatment: Ach esterase inhibitors, but eventually when there are no receptors ! death, unless:

Thymoma (20%) or germinal follicles in the thymus (B-cells !! which makes the auto Ab) are responsible ! **Thymectomy** (third - complete cure, third - partial).

SLE: first - positive ANA (99% **sensitivity**), then anti-Sm (100% **specificity**) and anti double stranded DNA (98% **specificity** & indicate kidney disease) to confirm. Butterfly distribution (mallar) rash on the face, morning stiffness, pericarditis.

LE cell - anti DNA Ab react against DNA and phagocytized by neutrophils.

Anti Ro (also present) can cross placenta and attack baby's conduction system.

- PSS/CREST: if the kidney is involved, it's PSS.
- Dermatomyositis: raccoon eyes, "CK, rash over the proximal phalangeal joint (Gottron's patches). Highest association with underlying cancer.
- Psosriasis: most common location is scalp, involves pressure points (elbow). Reddish, silvery-plaque rash.
- Allergic diathesis: atopic dermatitis (**type 1** H-S), kids.
- Contact dermatitis: **type 4** H-S (like positive PPD).
- Seborrheic dermatitis (Malassezia Furfura - fungi): adult disease. Disseminted disease suggest an **immunocompromised** patient (pre-AIDS defining).
- Tinea capitis (superficial dermatophytis): used to be by Microsporum Canis fungi, now it's Trichophyton **tonsurans**). Under UV-A, it fluorescents.

Workup: scrape the outside and do KOH preparation ! can see yeast form.

- All **other** superficial dermatophytis are by Trichophyton **rubrum**.
- Molluscum contagiosum (Pox virus): common in children. Volacano look (like BCC), sandy like material, kids pick on it, can get it over and over again.
- Pityriasis rosea: non preuritic rash on the truck (mostly), red on outside, pale on inside. "Christmas tree" distribution rash = Herald rash, in the lines of Langer, usually precedes. Topical steroids **do not help** (it's not a fingi).
- Dysplastic nevi syndrome: over 100 nevi, have to check it every year, could be a precursor lesion to melanoma. Very common.
- First step of management of different variation of **melanoma** is **excision**. Superficial spreading melanoma is the most common one.

Lentigo melanoma: older people, always on face (sun exposed area), least likely to metastases out of all the melanomas.
Acrolentiginous melanoma: worst kind, most aggressive. **Even blacks** (which don't get the other types) can get it. Primary disease under nails, palms, soles.
Nodular melanoma: aggressive, no radial growth, arises on normal skin.
Depth of invasion is the key to prognosis. **Less than 0.76mm ! no metastases**.

- Black widow spider: **neurotoxin** ! muscle spasm in upper thigh & abdomen.
- Brown Recluse = Violin spider: **necrotoxin** ! skin ulcer, not painful.
- Sebaceous glands have androngen receptors ! men get more acne.

CNS:

- CSF derived from choroids plexus (ventricles), ultra filtrated plasma - **!protein**, **no cells**, **#glucose** (if high - bacteria, fungus, cancer), **""chloride**.
- Block of the aqueduct of sylvius is the most common cause for hydrocephalus in
- children.
- Epidural hematoma: blood clot between the bone and the dura. Have to **fracture** the bone ! **arterial** (middle meningeal) rupture ! dura separation.
- When you reach 50 ml of blood (6 hours) ! uncal herniation ! death.
- Subdural hematoma: rupture the bridging veins between the dura and arachnoid !
- fluctuating consciousness, dementia (if untreated).
- CT for diagnosis of both types of hematoma and **hemorrhagic** stroke.
- 70% of tumors in **adults** are supratentorial (cerebral cortex).

70% of tumors is **children** are infratentorial (cerebellar cystic astrocytoma, medulloblastoma).

- **Hydrocephalus: communicating** - CSF in the ventricle with the subarachnoid space. Causes: benign tumor of the choroid plexus (! "ultrafiltrate ! "CSF ! "P), subarachnoid bleed or meningitis (no draining).

Non communicating (more common) - prevention of CSF to reach subarachnoid
space. Causes: stenosis of the aqueduct, ependymoma (4th ventricle, most common), meningitis (TB) at the base (! scar tissue which blocks the foramens).

- Normo pressure hydrocephalus, like with aqueduct stenosis (started as high pressure) ! dilatation of the ventricle ! dementia, ataxia, urinary incontinence.
- Arnold-Chiari syndrome: herniation of cerebellum & medulla into spinal canal.

- Dandy-Walker syndrome: cerbellar vermis & 4th ventricle did not develop.
- Tuberous sclerosis (AD): proliferation of astrocytes ! tubercles (hamartomas) bulging into ventricles, angiomyolipoma (hamartoma) in the kidney, facial angiofibromata (adenoma sebaceum), mental retardation, cardiac rhabdomyoma, shagreen patch (**hypopigmentation**) which shine under wood's light.
- Tonsillar edema: tonsils herniate into the foramen magnum
- Uncal (tentorial) herniation: uncus herniates through the tentorium cerebelli, pressing against the mid brain ! Duret hemorrhages, compression of CN-III ! opthalmoplegia of 4 eye muscles (**not** lateral rectus - VI, sup. oblique - IV) ! ocular nerve pulsy - **down** and **out**.
- First sign of uncal herniation is mydriasis (dilated pupils) on the **side** of the herniation.
- Posterior cerebral artery compressed ! occipital lobe infarction.
- Trocheal nerve palsy - **down** and **in**.
- Papilledema is a sign of "intracranial pressure. Vit A toxicity or lead poisoning (due to "vessel permeability) can cause it.

- NTD: "(FP. Have to be on folate **before** pregnancy to prevent it.

Anenchepahly - absent brain.

Spinia bifida occulta - vertebral arch don't fuse with each other. If meninges come out - meningocele, if both the cord+meninges - myelomeningocele.

- **Neurofibromatosis (AD): café au lait** spots, axillary freckles (brown pigmentation), neurofibromas, plexiform neurofibroma (diffuse soft tissue or nerve enlargement following the course of a nerve, involve skin, subcutaneous tissue, cause distortion of bone growth ! "elephant man"), Lisch nodules.

AD characteristics: Late manifestation, penetrance (not in this case), variable experivity (expressing in different severities in the same family).

Relation to pheochromocytoma ! HT ! 24 hour urine for metanephrines, VMA. Related tumors: **NF2** - acoustic neuroma (benign tumor of schwan cells of CN-VIII), optic nerve glioma (most common), **NF1** - meningioma.

- Albright syndrome: **café au lait**, precocious puberty, short stature, shortened 4th + 5th metacarpals (K-K-D-D), polyostotic fibrous dysplasia ("whorls" of CT).
- Syringomyelia: cavitation in the central segments of the spinal cord (cervical, mainly). Loss of musculature in the intenal intrinsic muscle of the hand (like in ALS), loss of pain and temperature sensation in a cape like distribution along arms and shoulders, bladder problems.
- **ALS: pure** motor loss (both upper and lower motor loss)
- **Meningitis:** nuchal rigidity, cerebral abscess, pus at base of the brain ! obstructive hydrochepalus. Treatment: steroids (prevent scar tissue formation complication) and antibiotics. Deafness is one of the most common complications.

Most common causes in **first month** is: #1: Strep Agalactiae (also of sepsis), #2: E. Coli, #3: Listeria Monocytogenes (**don't eat** soft cheese).

Most common cause from **1 month to 18 years** is Neisseria Meningitidis.

Most common cause **above 18 years** is Strep. Pneumoniae.

"protein, "neutrophils, #glucose.

- Cryptococcus: **narrow** based buds on India ink (**broad** = Blastomycosis). Most common cause of meningitis in AIDS patients.
- Encephalitis: sleepy, drowsy, mental status abnormality.
- Rabies: most common cause in the US is skunks. Raccoons (NJ), foxes (SF), coyotes (Texas). Dogs are the leading cause in 3rd world countries.
- Negri bodies (pathognomonic inclusion bodies in nerve cells with rabies virus).
- Congenital CMV: periventricular calcifications, encephalitis. Urine culture is best for diagnosis.
- Tumbling motility: Trichomonas Vaginalis, Listeria Monocytogenes.

- Mucor mycosis in the frontal lobe is common with **diabetics** in ketoacidosis.
- Toxoplasma: multiple space occupying lesions in the brain. AIDS, CD < 50.
- Cysticercosis (**Pigs**): focal epileptic (grand mal) seizures (dilantin therapy), multiple cystic calcified lesion in the brain.
- Creutzfeldt-Jakob disease (prions): neuropathologist, neurosurgeons mostly get it. Undercooked beef, lettuce from Arizona (use cow manure for fertilization).
- Most (atherosclerotic) strokes are **pale** liquefactive infarcts.
- Emboli from the heart almost always go to the middle cerebral artery ! hemorrhagic infarct.
- HT ! intracerebral bleed ! clot in the putamen, basal ganglion.
- HT ! lacunar infarcts ! can casue **pure** motor stroke or pure sensory stroke.
- Subarachnoid hemorrhage: ruptured congenital berry aneurysm, most commonly in the junction of the anterior communicating branch &the anterior cerebral artery.
- MS is the most common demyelinating disease in the US.

Auto Ab against the myelin sheath. "proteins, normal glucose, "lymphocytes. Nystagmus, ataxia, optic neuritis with blurry vision, internuclear ophthalmoplegia (**pathognomonic**, demyelination of **both** sides of medial longitudinal fasiculus). Charcot triad: nystagmus, intention tremor and scanning apeech.
Changes confined to **CNS**, no peripheral involvement.

- Morbili virus (measles, SSPE), papova (polyoma JC) virus (PMLE), HPV ! infect oligodendrocytes ! demyelination.
- Guillian Barre syndrome: acute inflammatory demyelinating disease primarily involving the **PNS**. Autoimmune etiology, often preceded by viral infection (URI), immunization or allergic reaction. """protein, "cell count. **Ascending** muscle weakness and paralysis beginning in the lower part of the lower extremities. Death due to respiratory failure. Most patients recover.
- Alzheimer's: hydrocephalus ex vacuo (due to loss or atrophy of brain tissue), senile plaque (congo red will show **' amyloid** inside ! neurotoxic), dementia, neurofibrillary tangles (any kind of dementia show that, Huntington's), hirano bodies, generalized atropy with **moderate** neuron loss (frontal, hippocampus).

It's a presumable clinical diagnosis. only way to confirm it is an autopsy & amyloid gene is on chromose 21, so all Down's patients has alzheimer's.

- Pick disease: **pronounced** brain atrophy, temporal and frontal lobe. Ballooned neurons (pick cells), cytoplasmic inclusions (pick bodies). Slowly progressive dementia, language disturbances, behavioral changes, even mutism.
- Huntington (AD): **CAG** nucleotide repeat, **chr. 4**. Paternal transmission results in increased number of repeats ! earlier onset in next generations (usually 30-40). Progressive degeneration and atrophy of the **caudate nucleus**, putamen and frontal cortex with neuronal **depletion** and gliosis.
- Parkinson: usually over age 50. Depigmentaion of **substantia nigra** and locus ceruleus, damaged cells contain Lewy bodies (eosinophilic inclusions) ! dopamine depletion. Therapy: L-dopa. Pill rolling tremor, expressionless face, slow movements, muscular rigidity.
- ALS: degeneration of upper and lower motor neurons ! atrophy of lateral corticospinal tracts and anterior motor neurons ! hyperrefliexia, spasticity. Clinical onset in middle age with death in 1-6 years.

Higly Repeated Pathology Related BCQs

- Which of the following is opportunistic organism – Klebsiella
- Pseudomembranous colitis is Caused by - Clostridium difficile
- About aspergillosis which is not correct – Is caused by long term antibiotic use
- Most common cause of puerperal sepsis - Bacteroides
- In utero, infection is not caused by - Rhinovirus
- A patient presents with cervical lymphadenopathy. He has granuloma on histopathology what is the diagnostic finding in this case for T.B - Caseous necrosis
- A woman presented with vulgar Itching and pinkish purulent discharge. What is the cause - Trichomonas vaginalis
- Presence of delta antigen shows (HDV) - Chronicity
- Most common organism Involved ln post-operative abdominal and gynecological infection is - Bacteroides
- A patient has fever 40c with flank pain increase frequency. Chill's and rigors. Diagnosis is done by - Blood and urine culture
- Regarding typhoid fever - Asymptomatic carriers should be isolated and treated
- Causative agent of meningitis In 60 years old man Is - Streptococcus pneumonia
- Cause of death in pneumonia due to shock is - Gram -ve bacteria
- Diphtheria exotoxin have powerful effect on - Heart
- Virus does not cause - Lipoma
- First week diagnosis of Typhoid - Blood culture
- For disinfection hands should be washed with: Alcohol with chlorhexidine
- The operating room should be cleaned with which of the following drugs after surgery of HIV patient - 2% glutaraldehyde
- A child died of severe pneumonia, on autopsy the lung showed warthin finkledey giant cells with many nuclei. Causative organism is - Measles virus
- Target tissue of Rickettsia is - Endothelial cells
- A patient presented with sore throat & fever. Blood picture shows atypical lymphocytes diagnosis is - Infectious mononucleosis
- HSV is associated with - Vulval papules
- Most common organism involved in infection caused by IUCD - Actinomycosis
- Ameobic infection reaches lungs via - Direct extension from Liver.
- Dry heat kills the b bacteria by - Oxidation
- Clostridium perferingens acts by Producing - lecithinase
- Gonococcus in easly ldentifledd in exudate specmen by - Gram staining
- Which is not oncogenic - Hep D vinus
- 6 years old girl has meningitis, Most common organism is - Streptococcus pneomonie
- A Young boy has distorted nose and cervical lymphadenopathy. Lymph node biopsy shows non caseating granuloma and sputum AFB Is positive. Diagnosis is - Leprosy
- Which does not follow orofecal route - Ankylostroma duodenale
- Cholangio carcinoma is caused by - Clonarchis Sinensis
- Young boy has bilateral parotid enlargement. Diagnose - Bacterial parotutis
- About Myeobacterium TB. Which is false - Causes disease only in humans

- Which is false about spores - Produced under nutrient rich conditions
- Neonatal Rubella infection is screened by measuring which antibody - igm
- Toxic shock syndrome Is caused by - Staphylococcus
- Yellow fever infection occurs In - Epidemic
- Regarding entameba histolytica - Occurs in both trophozoite and cyst stage
- Corynebacterium diphtheria is - Club shaped
- Shigellosis is caused by - Enterotoxin
- Sepsis is dlagnosed mos appropriately by - Blood culture
- Which is transmitted by mosquito - Yellow fever
- Gonococcus is best easily diagnosed by - Gram staining
- Diagnostic test for streptococcus -Blood culture
- Diphtheria Is transmitted by - Respiratory
- Which organism causes Pyogenic lung abscess - Staphalococcus
- Which of the following caused by bacterla - Histoplasmosis
- True regarding clostridium difficile - Produce alpha toxin
- A Patient with granulomatous lesion in bladder develop carcinorma.Cause is - Shistosoma hematobium
- After appendectomy pt develops chronic wound abbess and draining sinus containing yellow granules, organism is - actinomycosis
- A fisher man presented with slowly developing lethargy fatigue and palpitations. His diet comprises of fish mostly Physical exam showed pallor and loss of touch sensation in both feet and limb. His cbc showed hb 8 mcy 132platelets 110. Most likely causative parasite: Diphylobothrium latum
- Black water fever is cause by - Plasmodium falciparum
- Most common cause of subacute bacterial endocarditis - Strep. Virhdans
- Cause of gas gangrene is Clostridium perfringens-
- Which vaccine Is not liye - Tetanus
- In Syphilis diagnosis - Material taken ls from Genital sores
- In which parasite infection the respiratory Symptoms predominate - Ascaris lumbricoides
- Diagnosis of H influnzae meningitis - CSF culture
- Japanese encephalitis is caused - Arboirus
- 20 yrs old girl has been raped she has now watery Vaginal discharge and has painful red papules and ulcers on vaginal and vulva and tender inguinal lymph nodes. Causative organism - Herpes simplex
- A married woman has right sided tubulo ovarian abscess. Causative organism - Gonococcus
- Spores should be disinfected by: Dry heat at 160c
- Sore throat is caused by - Group A beta hemolytic strep
- .Least positive titer for widal test - 1:160
- All of the following can be stored at 4c except - Vibrio cholera
- Vaccine is available for all except - EBV
- Bacterla that grow at 42c - Campylobacter > Vibrio cholera
- Actinomyces does not directly cause disease in - Brain
- Most common cause of hosp acquired Infection is - Indwelling catheters
- Which method is Used to kill spores of Surgical instruments - Dry heat at 160c for 1 hr
- Whlch one is not used as Insecticidal - Soap
- Generalized Lymphadenopathy is seen in all except - Malaria
- Tuboovarian abscess caused by iucds What is the most likely causative agent - Actinomycosis
- Which of organism requires selective media for its diagnosis Campylobacter-

- Malaria is most commonly associated with. - P vivax
- Regarding klebsiella - Cause 3% of community acquired pneumoniae
- Echoviruses usually cause - Meningoencephalitis
- A warty growth on vulva due to viral infection is - Condylomata acuminatum
- Trachoma is caused by - Chlamydia
- In Patient with advanced HIV and opportunistic infections which test will you do for further management - CD4 count
- Post op wound greenish pus discharge which organism is involved - Pseudomonas
- Which of the following causes viral mediated host DNA transfer- Transduction
- Which of the following most probably has animal reservoir- Influenza
- A patient has atypical lymphocytes, enlarged lymph nodes. Which test should be performed- Monospot test
- The reticuloendothelial system is primarily affected by: Histoplasmosis
- A patient has pneumoconiosis - Which is predominant pathology in lung Pulmonary fibrosis
- Inactivated toxin used as toxoid vaccine in - Tetanus
- Diagnosis of typhoid during 2nd Week is by - Blood culture and widal
- Diagnostic feature of plasmodium falciparum - Black water fever
- Atvpical lymphocytosis does not occur in - congenital syphilis
- Clostridium tetani - May occur weeks to months after inoculation
- A soldier presented with 3 month history of fever bilateral lymphadenopathy and Hepatosplenomegaly, anemia, fatigue.He has history of sleeping on floor & bite by some fly. The diagnosis is - Kalazar
- A patient with diabetic keno acidosis did not respond to treatment and died. Autopsy show inflammatory lesion in kidney brain and lung with Some fungus. Most likely organism - Mucormycosis
- A pregnant female has cat as a pet What infection can occur in child - Toxoplasmosis
- Cats can cause which of the following infection - Toxoplasmosis
- Organism of sub acute endocarditits is - S.viridans
- Eating raw or under cooked meat can cause infestation by - Tape Worm
- In 90 percent of anthrax infections- Skin lesions
- Regarding Anaerobes Infection all true except -Granuloma formation
- Which of the following organism produce hemorrhagic fever when person Is infected for the 2nd time -Dengue
- Which is not caused by EBV -Kaposi's lymphoma
- About chalamydia -cause trachoma
- .If patient is HIV sera positive what is best approach -Repeat test with other methods
- True regarding atypical mycobacteria is -Resistant to common ATT
- Cervical cancer is associated with -HPV 16
- A Patient is taking immunosuppressant .Now has neck rigidity. CSF has high WBC mostly lymphocytes. On microscopy organism has halo around, the organism is -Cryptococcosis
- A man from AJK had fever with chills for last 6months.He Suddenly died of cough. On autopsy . Blood clots were Present in peritoneum. Diagnosis- Leishmaniasis
- A2 year old girl from Azad Kashmir presented with off and On Fever and looks pale.she has pancytopenia, hepatosplenomegaly and ESR 80.She has - Visceral leishmaniasis
- Regarding MRSA which is least appropriate Vancomycin is given to all contacts Lobar Pneumonia organism is diagnosed by - Sputum culture
- A girl in 1st grade has developed dyspnea. Few months back she had sore throat. What is the best initial test for diagnosis - ASO titre

- Malignant tertian malaria is caused by - P.falcipanum
- Regarding typhold.true is- Rose spots on 7th day
- Cause of lymphoid tumor In HIV patient: EBV
- A patient developed HAV but recovered. Biopsy will show Normal hepatic architecture
- In primary tuberculosis, all of the following may be seen except - Cavitation
- Staphylococcus Aureus differs from Staphylococcus epidermidis by - Coagulase positive
- Positive Shick's test indicates that person is - Susceptible to diphtheria
- In a patient with typhoid, a diagnosis after 19 days done by - Stool culture
- Which of the following Is transmitted by rat urine - Leptospira
- AJI the following are true about listeria except - Gram negative bacteria
- Regarding HIV which of the following is not true - is a DNA retrovirus
- Epstein Barr virus causes all the following except - Measles
- In a patient, corneal scraping reveals narrow angled hyphae, Which of the following is the likely etiologic agent - Aspergillus
- All of the following are sexually transmitted except: Echinococcus
- All of the following infections may be transmitted via blood transfusion, except Heat labile instruments fortuning surgical procedures can be best sterilized by - Ethyene oxide gas
- 28 children consumed eatables procured from a picnic party. Twenty children developed abdominal cramps followed by vomiting and watery diarrhea 6-10 hours after the party. The ost likely etiology for the outbreak is- Staphylococcol toxin
- A chest physician perform bronchoscope in the precious room of the patient department .To make the instrument safe for use in the next patient waiting outside the most appropriate method to disinfect the endoscope is by - 2% gluteraldelyde for 20 min.
- .An increased of cholangiocarcinoma Is seen In all of the following, except: Hydatid cyst of liver
- A30-Year old Hiv positive patient present with fever, dyspnoea and non-productive cough, patient is Cyanosed. His chest X-ray reveals bilateral, symmetrical Interstitial Infiltrates. The most likely diagnosis is - Pneunocystis carinii pneumonia.
- Toxin inyolved In the streoptococcal toxic shock syndrome is: Pyrogenic toxin
- A chlld presents with a white patch over the tonsils, diagnosis IS best made by culture in - Loeffler medium
- Congenital syphilis can be best diagnosed by - igm ftabs
- HIV Can be detected and confirmed by: Reverse transcriptase- PCR
- The serum concentration of which of the following human lgg subclass Is maximum - igg1
- The most common organism amongst the following that Causes acute meningitis In an alds patients Is - Cyptococcus neoformans.
- A bacterial disease that has been associated with the 3"Rs"i.e. Rats,.ricefields, and rainfall Is - Leptospirosis.
- The following is true for Mycoplasmas except - Are sensitive to Beta lactam group of antibiotics
- The active Immunity offered by tetanus toxoid is effectively in nearly - 100 % of the patients.
- The commonest organism causing cellulitis is: Strep pyogenes
- In a patient with AIDS chorioretinitis Is typically caused by: Cylomegalovirus.
- All are true about Neisseria gonorrhea except Gram positive cocci
- A 30 year old male, with a history of sexual exposure comes with a painless indurated ulcer over the penis with everted margins .The diagnosis is - Syphilis
- Ali are features of peripheral neuritis in a patient with Hansen's disease except - Decreased tendon reflexes

- In an HIV positive patient with tuberculosis all are true except - Increased sputum positivity'
- Toxin Involved in the streptococcal toxic shock Syndrome is - Pyrogenic exotoxin
- Which of the following is most predominant constituent sulfur granules of actinomycosis - Organisms
- The principal site of respiratory enzymes in bacteria - Mesosome
- Many strains of staphylococci develop resistance to penicillin through - Transduction of plasmid
- The characteristic lesion produced by staphylo- coccal infection Is; Abscess
- Streptococci infection Characteristics - Spreading in nature, Cellulitis, Lymphangitis
- .The infection with the clostridium tetani spreads via - Motor nerves
- Naturally occurring tetanus is - Descending type
- The characteristic feature of a tubercle ls - Epithelioid cells
- Mantoux test If positive Indicates - Patient had prior infection with tuberculosis
- BCG vaccination confers on an individual: Active immunity Tuberculosis bacilli can remain alive in sputum for - 20 hours
- The mode of entry of lepra bacilli is via- Respiratory
- Which of the following disease is caused by the bite of mosquito -Filariasis
- Child with skin itching, stool examination reveal worm Presence of which of the will aid in diagnosis - Eosinophils
- A child with x Linked agammaglobulinemia has Increased risk of which type of infection -Pyogenic
- Air borne droplet infection can Spreads up to- 3to 6 Feet
- Liver malignancy Is caused by -Clonorchis sinensis
- Under cooked meat can give rise to disease caused by- tapeworm
- Which of the following shows that infection is highly transmissible- hbe +ve, Anti-Hbe-ve
- A 40 year Male working as a taxi driver in sharjah presented with C/ O fever, weight Loss, anorexia .He is emaciated has jaundice and generalized Lymphadenopathy .what is the diagnosis -AIDS
- A young female presented with fever and cough. After few days, she developed loint pain investigation of choice - Blood culture
- Regarding Mycobacterium Leprae - lt is an acid fast intracellular
- Regarding Clostridia, most Appropriate - Spore forming bacteria
- Most common source of gram ve bacteria in hospital - indwelling unary catheter
- .A man with AIDS who has Symptom with CD count 800 Presented with suppurative otits media. Causative organism is - strep Pneumonia
- Patient with Clostridium Botulinum food poisoning. Characteristic feature will be - Flaccid paralysis of respiratory muscles
- Human is Intermediate host in which of the following: Hydatid cyst disease
- Which one Is transferred via blood Hepatitis B virus
- Most common organism associated with hypersensitivity reaction - M.tuberculosis
- A mother delivered a child at home,after 5 days baby presented in hospital with neck
- Stiffness. Cause of meningitis - Sterptococcus agalactiae
- Young boy with3 week history Of facial weakness and nasopharyngeal sinusistis, on examination bilateral facial weakness, With drooling of saliva from mouth - Corynebacterium diphtheria
- Dlabetic Ketoacldosis patient managed but died, Most likely Infectlon ls - Mucor
- Gram -ve infectlon cause septic shock in which of the following tracts - urinary tract
- In congenital rubella termintation of pregnancy Is Indicated if one of the following ls positive- igm
- HBV Is not present in - Stools
- An HIV-positive patient asks you if you can tell the chances of his progression to symptomatic AIDS which one of the following tests would be most Useful - CD4 lymphocyte count

- Which virus may be detected by the polymerase chain reaction (PCR) In a variety of cells of patients With nasopharyngeal carcinoma - Epstein-Barr virus
- Children with following conditions should not be given MMR vaccine - A history of anaphylaxis-
- Immunological test Is done for - Hydatid disease
- Which of the following, might be commonly found in an intra abdominal abscess? - Bacteroides
- The causative organism. Of Hansen's disease is - Mycobacterium leprae
- Which of the following organisms causes Pneumonia and maybe found colonizing air- conditoning sytems? - Legionella
- Which virus is responsible for - avian influenza H5N1
- Community acquired pneumonia most common cause ls - Streptococus
- 15 year Gardner with history of chest pain, no other Symptoms X-Ray was done which showed Round mass which is calcified in lower lobe of lung - Aspergillus
- The following microbe cannot be transmitted orally - Clostridium perfringens
- How are Infectious diseases, Such as colds and influenza, most commonly spread? Breathing viruses in air
- Which of the following vaccination is absolutely contraindicated in pregnancy- Yellow fever
- Diseases transferred through vertebrate animals to humans - Zoonosis
- In new born infant the commonest source of Tetanus is- Umbilicus
- Which water is safest drinking purpose - Spring
- Which is broad spectrum antifungal - Amphotericin
- In hospitals most common cause of wound infection - staph aureus
- Which is non bleeding ulcer related to streptococcus - Meleney ulcer
- Man who visits first time to Pakistan develops fever and then develops coma. On Investigation retics 10% platelet and wbcs decreased with jaundice. Most likely organism is - Falciparum
- Farmer with migratory lesion on foot is due to Cutaneous larva migrans -
- Reservoir of plaque is rats but Sometimes it can be infectious - Flea
- Cause of fatal diarrhea - Vibrio cholera
- Killed whole organism used as vaccine for - Whooping cough
- A patient presents with diarrhoea and culture reveal slightly curved bacilli gram negative bacteria.Most likely organism will be - Vibrio cholera
- A man driver at UAE becomes ill and returned back to his city. He develops fever, weight loss and diarrhoea ,hepatosplenomegally and lymphadenopathy since 1 month What is the cause of his illness - AIDS.
- Primigravida in 2nd trimester felt sudden lower abdomen severe cramp followed by watery foul smelling discharge.After 2 days delivered a still born child. On examination chorion and placenta have neutrophilic infiltration. It is likely caused by which organism - Toxoplasmosis
- Which of the following in maternal serum for rubella should b an indication for termination of pregnancy - Ig M
- All of the following will cause an ulcer on genitals except - Gonorrhea
- Herpes simplex virus is transmitted by - Droplet
- Person arrives to Pakistan for the first time has history of two days of fever and headache went In coma, Has renal function deranged as well - Malaria
- Pre term labour is associated - Bacterial vaginosis
- A man of 70 has recurrent UTI cause - Urinary outflow obstruction
- Cause of death in gas gangrene - Toxemia

- 6 years old boy presented with sore throat and fever, His microbiological review shows complete hemolysis on sheep blood agar - Group A beta hemolytic
- Dead organisms in vaccine: Pertussis
- Spore producing organism - Clostridia
- The diagnostic lab test for the infection by streptococcus beta haemolyticus is - Blood culture
- Diphtheria is transmitted by - Respiratory
- :Incubation period of which disease is longest- HIV > Infectious mononucleosis
- Chronic Fungal infection with rhinosinusitis causing medial erosion and granulomas - Aspergillus
- Amoeba causes lesions in which part of gut: Cecum
- Dental carries are due to - Sretptococcus
- Cause of global blindness: Chlamydia Trochamatis
- New born is diagnosed to have inclusion conjunctivitis because mother had vaginal Infection. Possible cause is - Chlamydia
- Cholera is Transmitted by - water and food
- 8 years old girl presents with facial pain and mandibular mass likely cause of this presentation EBV
- Parasitic disease which is transmitted through mosquito - Filariaisis
- 10% Formaldehyde is used for sending biopsy specimens because of - To prevent autolysis
- A patient having AIDS may also have one of the following - Cervical Carcinoma
- How can rubella infection be prevented -Anti rubella vaccine
- Torch can causes congenital abnormalities except -Pneumonia
- 3 years old non vaccinated kid develops meningitis. On microscopy metallic sheen coccobacilli are seen. Diagnosis is - H.influenza
- Fetal infection in amniotic fluid Is diagnosed by - IL-6
- Human bite spreads - Anaerobes
- You are working in ICU. You need to do to which of the following to prevent iatrogenic infections - Use extensive handwashing
- Q fever is caused by - Rickettsiae
- Plague transmitted by - Flea
- Cystoscope and endoscope sterilization at 100c for 20 min- Tyndilization
- Most common etiological agent for tumor in AIDS - Ebv
- Which vaccine is contraindicated in child with history of convulsion - DPT
- .A person Living on river side since 2yrs, having blindness, ophthalmologist identify which
- Larva - Onchocercosis
- Most common cause of osteomyelitis Is - Staphylococcus aureus
- At the time of birth presence of which immunoglobulin in neonate's serum Indicate the Intrauterine infection - lg M
- Bladder cancer is associated with- Schistosomiasis
- Pathogen of plaque (black death) disease - Yersinia pestis
- Pathogen of sleeping sickness - Trypanosoma
- Food poisoning by staph aureus mediated by - Enterotoxin
- Vaccine is not available against - EBV
- A young soldier stationed in thlaland come home with torrential diarrhea his feces shows donut shaped cyst. Most likely cause is - Crytosporidiosis
- Which is more dangerous if transferred durng blood transfusion - Cmv
- Heterophile antibody is seen in - Infectious mononucleosis

- Multiple washing techniques used in - Immunohistocemistry
- Intravenous drug abusers are mostly likely to suffer from; .Infectious endocarditis
- Brucellosis is Transmitted by - Unpasteurized Milk
- Following is true regarding sterilization Autoclaving is heating objects at 121°C at 15 psi for 3min
- Which of the following fungi produce life threatening infection in patients with diabetics ketoacidosis - Mucor
- Most common cause of the pelvic Inflammatory disease is? Chlamydia
- Hairy tongue on a homosexual patient is due to which of the followings - Due to the overgrowth of chromogenic bacterial
- True about Hairy tongue Caused by - Epstein –barr virus
- EBV virus causes - Nasopharngeal carcinoma
- For the diagnosis of diphtheria, what test should be done - Throat or skin swab should be sent for smear and culture
- Which of the virus most commonly causes bronchitis - Respiratory syncytial
- Organism most commonly responsible for wound infection - In hospital wards is Staphylococcus aurous
- HIV+ patient surgery done then which antiseptic to use after surgery to clean floor - 1% hypochlorite
- Alpha hemolytic bacteria are – s.pneumoniae
- A patient presented with prolonged diarrhea and undergoes esophagogastroduodenoscopy. Biopsy of small intestine demonstrates crescent shaped protozoa adjacent to epithelial brush border. Which organism could it be – Giardia lamblia
- A 28 year old fisherman presented with slowly developing lethargy easy fatigue and palpitations. His diet comprises of fish and rice only. Physical examination revealed pallor. There is loss of touch sensation in btoh feet and legs. Hb 7.5gm/dl. Stool DR showed ova of intestinal parasite. Likely organism – Diphyllobothrium latum (B12 deficiency)
- Amoeba causes lesions in which part of gut – cecum
- Reinfection with what causes fever and hemorrhagic manifestations – dengue
- A 32 year old man presented with fever, dry cough and joint pain. His investigation revealed wbcs 7.5 with 70% neutrophils anemia and increase unconjugated bilirubin. Likely cause – mycoplasma pneumonia
- Bartonellosis is caused by – Gram negative bacteria
- Common carcinogen of CA cervix – HPV
- Hallmark of AIDS – Progressive immune depletion
- Burkit lymphoma oncogensis by EBV – Protooncogene c myc translocation (NOT transcription)
- Painful papule at labia – HSV2
- Which virus has greater chance of transmission nin the instruments are sterilized with alcohol – HIV
- After splenectomy the child is least susceptible to following infection – Ecoli
- Killed vaccine is – Whooping cough
- Most common cause of UTI – Ecoli
- Which is transmitted through fecooral route – Hep A and Hep E
- Person has diarrhea for 1 week along with fever, abdominal tenderness in rt hypogastric region. There is occult blood in stool. On colonoscopy there is ulceration of ascending colon but transverse and descending colon have no features. Which organism will be seen – Entamoeba histolytica
- True regarding pinworm cycle - Ingested in form of egg

- A 40 year old man from sibbi baclohistan presented to you with fever and lymphadenopathy. He gives history of sleeping on floor and bites by bugs. On investigation unicellular structure is seen on peripheral film. He is likely suffering from – Kalazar
- A patient developed microcytic hypochromic anemia. On microscopy of stools eggs were noticed. Likely organism – Acylostoma duodenale
- Lady went from cold weather area to Jeddah and developed vesicular lesions in mouth. Likely organism – HSV1
- Child present with fever and developed rash that appeared first behind ear then spread to chest and extremitis. Most likely diagnosis – Measles
- Plasmodium with longest incubation period – P. Malariae
- Vulval intraepithelial lesion is – Paget's disease
- Amoebic liver abcess is diagnosed by – Serology
- {atoemt jad red raised purple lesions on skin which are increasing in size and number. He also had watery diarrhea on month back and also has generalized lymphadenopathy with oral thrush. The likely organism – HHV8
- Sample is taken from which one of the following for treponema pallidum infection detection – Genital swabs
- Lady had vaginal infection with foul smelling clue cells on gram stain. Likely organism – bacterial vaginosis
- Malarial parasite enter in human body in which form – sporozite
- Dormant phase in humans of malaria is – Hypnozite
- Diabetic with jaw draining abcess histological finding – Granuloma with abscess
- Which vaccine shall be give to the patient who has undergone splenectomy – pneumococcal
- Shigella dysentery effects are due to – mucosal invasion
- Which of the following has the longest incubation period – HIV
- Few days after bacteremia of typhoid where will bacteria reside – payer's [patches
- Most common cause of gram negative septic shock – Urinary tract
- Common specie of Corynebacterium affecting human is – diphtheria
- Shigella causes bloody stools due to – invasion of mucosa
- Increased number of lymphocytes are present in – TB
- Warthin starry silver stain is used for – Diagnosis of spirochetes, H pylori and legionella
- Which one is DNA virus – Infectious mononucleosis caused by EBV
- Most important strong exotoxin in strep pneumonia – Streptolysin
- Risk of congenital cataract can be prevented by – Vaccination of girls of child bearing age
- Rat bite fever caused by – Streptobacillus monilliformis
- Virulent strains of staph aureus are positive for – Coagulase test
- Quotiidian malaria is caused by – P. Falciparum
- Patient with history of heart lung transplantation comes with headache. Which organism is likely – toxoplasmosis
- Which of the following is not caused by hookworm – macrocytic anemia
- Aedes mosquito will not cause – Japanese encephalitis (but it can cause raft valley fever, yellow fever and dengue)
- Most common cause of gas gangrene in lower limb – Clostridium welchii
- A child with history of eating mud. He also complains of worms of 6cm coming out. Likely diagnosis – Ascaris lumbricoid
- Q fever is caused by – Rickettsia

- A 9 year old boy are knee operation developed fever. Examination showed that the knee joint was tender, swollen. Examination of pus showed beta hemolytic positive organism which organism is the culprit – staph aureus
- A cjild is born with cataract which organism likely infected the mother – Rubella
- Which of the following is NOT an opportunistic bacteria – Histoplasma
- Longest phase of HIV without any symptoms – Latent phase
- Cysticercosis caused by – Ingesting eggs of taenia solium
- Chlamydial infection causing chlamydia psitaccosis is – Obligate intracellular
- A person living on river side since 2 years presents with blindness, ophthalmologist will identify larvae of - Onchocerciasis
- Parasitic infection spread by mosquito bite is – Filariasis
- Cause of meningitis in 48 hours old baby – Strep Agalactiae (Group B) > Ecoli
- Patient presents with backache and fatigue stool culture shows binucleate organism with 5 pairs of flagella. Which drug will you prescribe? - Metronidazole
- A person visited Thailand and now presented with fever, chills, bodyaches and postural hypotension. Most probable diagnosis – Malaria
- A tourist 2 weeks after returning from another country presented with fever, generalized lymphadenopathy and rash. Atyical lymphocytes on peripheral smear. Most probable diagnosis – HIV (seroconversion)
- Regarding HPV – Serotype 16, 18 and 31 are associated with dysplasia and CA cervix
- Polysaccharide antigen conjugated to increase immunity with vaccine in which of the following – Meningococcal
- TB is important because it is – Type 4 hypersensitivity reaction
- A young patient presents to you with fever neck ridigity. Diagnosis of meningitis is made. Gram stain of CSF reveals pus cells and cocci. Likely organism – streptococcus pneumonia
- Weil felix test is done for the identification of – Rickettsia
- A 66 yo came with fever and malaise for few days. On CXR disuse bilateral infiltrates. On labs neutrophils slightly raised. Patient was given treatment and recovered in 2 weeks without any sequelae. What was likely the causative organism – Klebsiella
- Rectal biopsy is done to diagnose amoeba infection by – PAS stain
- Remission of symptoms occur in – Latent period
- A study was done on only male patients who were sexually active. It was observed that one group of patietns have disease with ulcer on external genitalia while others have STD without any ulcerative lesion on external genitalia. The organism involved in second group is- N. Gonorrhea > Chlamydia trachomatis
- Which of the following is caused by mosquito bite – Yellow fever
- Gummatous necrosis is feature of – syphilis
- Most common infection to new born child which causes mental retardation is – TORCH
- Which of the following suggest UTI on Urine D/R – Nitrites
- An elderly patient has history of high grade fever from last 3-4 days. Then he suddenly collapsed. On labs his Hb was 5g/dl. What is the diagnosis – Cerebral malaria
- Crypt abscess in parotid due to – Staph aureus
- HIV patient with CD4 count 200 have white cottage lesion, likely agent responsible – Candida albicans
- Cotton wool spots are characteristics of which opportunistic infection – CMV
- Flask shape ulcer in colon is due to – entamoeba histolytica
- Organism transmitted by cysts in meat is – taenia solium

- Staph aureus is differentiated from other cocci by – coagulase test
- Most common non bacterial opportunistic infection in burn patient – candida
- Lymphoid hyperplasia is seen in which infection – Leishmaniasis
- A farmer presented with right lower lobe mass 3.4cm in size. The most common cause is – Hydatid cyst
- A child with stridor and dyspnea had tracheostomy done most common causative agent – H. Influenza
- A neutropenic hypotensive patient was admitted in oncology ward and was diagnosed with pseudomonas aerugnosa infection. The disease is most likely due to excessive activity of – TNF
- A 55 years old patient presents with abdominal pain, bloating and foul smelling stool. Which of the following should be done for diagnosis? – Complete stool examination
- Increased lymphocytes than normal are present in which of the following infection – TB
- A young female presented with history of food poisoning. She is also having step ladder pattern fever and neutropenia. Likely organism responsible – Salmonella
- A 50 years old female patient undergoing chemotherapy due to CA breast is now presenting to you with mouth sores and white colour membrane on oral mucosa. Causative organism – Candida
- Female present with fever, dysuria and increase frequency. On examination gram negative rod is seen. Cause – E.coli
- Triad of sinus bradycardia, hepatosplenomegaly and lymphadenopathy is due to which of the following – Chaga's disease
- Regarding rubella prevention – Anti rubella vaccine in young females
- Mycobacterium causing TB. It is resistant to antibiotics due to its nature of – Thick cell wall
- A patient presented with gestational amenorrhea of 32 weeks having complaints of itching and vaginal discharge. OE there are pseudohyphae on the cervix. Which of the following organism is involved – Candida
- Amoeba commonly resides in – Colon
- Names of 4 important DNA viruses – Adenovirus, HPV, HBV, EBV
- Only helminth that spreads via mosquito bite – Filariasis
- Female came to OPD with presumptive diagnosis of bacterial vaginosis confirmed by presence of – clue cells
- A 10 year old boy ate from a street venfor. After that he developed fever and nausea long with vomiting. Fever subsided but he developed yellow sclera and jaundice. What can be attributed as the cause – Hepatitis A
- Endotoxin mediates its action by – activating complement
- Organism which grow most slowly on artificial media is – mycobacterium tuberculosis
- Patient has microcytic hypochromic anemia. His stool R/E reveals eggs. Likely organism involved is – Ancylostoma duodenale
- Transmission of HSV is via – droplet transmission and inoculation
- Amoeba causes lesions in which part of gut: Cecum
- Organism which produces fluorescent pigments and resistant to antibiotic & antiseptic. - Pseudomonas
- 0.5 cm perihilar nodule plus eosinophilia in blood sputum and biopsy. Most likely organism responsible will be - Non invasive -aspergillosis
- After gynecological surgery which anaerobic beta lactamase producing organism causes - infection Bacteroides
- Patient complained of Abdominal Pain and persistent vomiting. Most likely Cause is - Enterotoxin
- Which is a DNA respiratory virus - Adeno Virus
- Malarial parasite rate is calculated for which age group - Less than 5 years

- Virus related cancer - T cell leukemia
- Lady presented with rigors and chills and after 2 days developed blackening of urine likely diagnosis is - Plasmodium falciparum
- Major cells involved in hookworm infestation are – eosinophils
- Comon postoperative infection in hospital is caused by which organism – Staph aureus
- 5 year old boy visited his grandmother who died of respiratory tract disease 2 weeks before. From 5 days he has fever and cough. Xray shows solitary lesions measuring 2mm in right lung middle lobe and hilar lymphadenopathy. What boy is suffering from? – TB
- Most common method tetanus prevention is though – Toxoid
- About trichonmonas vaginalis what is correct – Is sexually transmitted
- Which toxin is responsible for producing scarlet fever - Erythrogenic
- True regarding igm - Pentamer with 10 binding sites
- True regarding pertussis - nasal and bronchial secretions are highly infectious
- Measles will cause - SSPE
- 22 year old sexually active boy reported to have been in contact with syphilis positive man. How would his physician know about him that he has acquired this disease - chancre on penis
- Immunological test done for - hydatid cyst
- Primigravida taking iron tablets lots of vegetables. What deficiency is she at risk of - Calcium > Folic acid
- A girl during her menstruation developed high grade fever because she was using tampons. Microorganisms responsible - Staph aureus (toxic shock syndrome)
- About corynebacterium diphtheria - Produce exotoxin
- Shortest incubation period - H. Influenza
- Which microorganism cause malignancy in git - H pylori
- Which of the following is ectoparasite - Lice
- Pseudomonas producing shock through - Endotoxins
- Treponema pallidum initial diagnosis made by - Genital sore
- Prozone phenomenon is - increased antibody titer
- Old man presented with persistent cough and thick mucoid sputum. Likely organism - Klebsiella pneumoniae
- Which of the following has shortest pre erythrocytic phase - Falciparum
- Characteristic feature of c. Botulinum ingestion - Respiratory failure
- A young boy has history of painful burning micturition. Urine contains pus cells and few epithelial cells. What further investigation will you advise – Urine culture
- Young patient with peritonsillar abscess causative agent – Streptococcus
- In infectious mononucleosis structure most likely to be damaged even on minor trauma – Spleen
- 12 year old child presents with cough and wheezing for the last 7 years. Xrays shows bilateral bronchiectasis examination shows thick sputum containing eosinophils, most likely cause is – Aspergillosis
- Brucellosis is transmitted by – Raw milk
- Immunity provided by DPT is – Artificial active
- After an abdominal surgery blood was transfused to a patient, after which he developed jaundice, vomiting, and lethargy. Hepatitis was diagnosed. Which is most commonly transmitted via blood transfusions – Hep B
- Child with rectal prolapse has parasitic infection with parasite shows short head. Most likely cause would be – Tricuris trichura

- AIDS related lymphoma is caused by – EBV
- Common microorganism in ascitic tap is – E.coli
- Quartan malaria is caused by – plasmodium malariae
- A male patient after a few days of severe burns developed high grade fever. Blood culture yielded of gram negative rod. He suddenly developed a bleeding diathesis. The most likely cause in this setting is – DIC
- Laboratory diagnosis of leprosy in its early stage is by – Nasal scraping for leprae bacilli
- AIDS spread commonly by – Blood transfusion
- Lecithinase produced by which organism – Clostridium perfringens
- Site of antigen binding on antibody – Hypervariable regions on L and H chains
- A patient had heart lung transplantation and was on immunosuppressive drugs, now presents with high grade fever neck ridigity and kernig's sign positive. CSF studies show an organism with clear cytoplasm with a halo around it. Most likely organism – Cryptococcus
- Corynebacterium diphtheria mode of transmission is – respiratory droplets
- Toxoplasmosis is caused by – Parasite
- Biopsy of intraocular tissue shows necrosis and Langerhans giant cells. Cause is – TB
- Person presents with bloating abdominal pain and very foul smelling stools. First investigation would be – Stool RE
- Patient on ventilator in ICU developed bilateral crepts. Test should be done – Tracheal aspirate + blood culture
- True regarding tetanus – Exotoxin has lethal effect
- A child presents with perianal pruritis. Which cells will be elevated – Eosinophils
- True regarding peneumococcus – Encapsulated
- Cause of death after liver transplantation commonly is due to whih pathogen – CMV
- A male complains of pain during micturition. Urine culture is negative for N. Gonorrhea but leukocyte are positive in urine examination. Which organism can cause this infection? – Chlamydia
- Most common cause of acute pyelonephritis – Ecoli
- HIV confirmation test in baby of HIV positive mother – HIV PCR
- A mother brings her 5 year old daughter to the emergency room and relates a 4 day history of sore throat and a painless but persistent serosanguinous discharge from the child's vagina. Pelvic exam confirms the history and the saline/potassium chloride preparations are negative. Likely pathogen – streptococcus
- Most common cause of nasopharyngeal carcinoma is – EBV
- Malaria is inactive in which stage of body – Hypnozite
- Most common non bacterial infection developed in burn patient – Candida
- Live vaccine – TB
- Which is not affected by leprosy – Ovary
- Abscess of mandible is caused by – Staph aureus
- Regarding vibrio cholera – Can tolerate highly alkaline medium
- Mycobacterium is non spore forming present in macrophage does not produce endotoxin or exotoxin yet it is dangerous. How does it cause inflammation – Pathogenic due to cell wall glycoprotein
- Painful genital ulcers occur in – Hemophylis ducreyi
- Causative agent of pyogenic lung abscess – Staph aureus
- Pulmonary TB most likely finding is – Posterior segment of upper lobe is involved
- EBV is not related to – Large T cell lymphoma
- Without T cell involvement which produce antibody response by itself – tetanus toxoid

- Child is diagnosed with bronchiolitis. Likely causative virus is – RSV
- A child presented with fever with rigors and chills accompanied by severe headache. On examination hepatosplenomegaly is present there is history of nausea and vomiting one week ago. Giemsa stain is positive. Likely responsible organism is – P. Falciparum
- Staph aureus virulence factor is – protein A
- A sexually active man presents with pain and burning micturition. No ulcers are seen on examination. Urine RE shows 50 WBC. He is gonococcus negative. Likely organism – Chlamydia
- Ghon complex is present in – primary TB
- Diagnostic test for infectious mononucleosis – Paul Bunnel test (prefer monospot test or heterophile antibody test if present in options)
- A patient presented with sore throat and later developed cervical lymphadenopathy. Biopsy showed atypical lymphocytes. Likely cause is – EBV
- A female presents with fever, rash and hypotension. There is history of using tampons. Which of the following will also occur in this condition – desquamation
- A 40 year old male had dinner at some restaurant during late niht he developed pain abdomen , watery diarrhea and projectile vomiting. Most likely organism – Staph aureus
- A child with history craving for mud presents to OPD. On examination a 6cm worm has emerged from her nose. Likely organism responsible – Ascaris lumbricoides
- Which of the following should be done for seasonal influenza prevention – Vaccine
- Passive immunization is achieved by – Immunoglobulins
- A patient presents with painful genital ulcers and inguinal lymphadenopathy. Likely causative organism is – HSV2
- Subgingival bacteria is – P. Gingivalis
- Which of the following is a feature of orynebacterium diphethria – Produces exotoxin
- A lady with 28 weeks of pregnancy on reexposure to which virus will develop fever and petechial rash – Dengue
- A patient presents with swelling on thigh with palpable crepitus and foul smelling discharge. There is history of thigh trauma also. Likely cause for this complication – Preoteolytic enzymes
- Dophtehria will likely affect which organ – Heart
- Cocco bacillus casing diarrhea and sepsis in a pregnant female is – Listeria
- How to differentiate between mycoplasma from chlamydia – Mycoplasma have no cell wall
- True about rickettsia – It does not have glycolytic enzymes
- Chlamydia and rickettsia are – obligate intracellular
- Initial test for leprosy – skin scraping
- Gonoccous is best diagnosed by – Nucleic acid amplification test (NAAT)
- A patient after eating canned fish developed descending paralysis. Likely organism is – Clostridium botulinum
- Serological test will be best for diagnosis of – Q fever
- A patient presented with food poisoning after eating hamburger. On EMB agar positive metallic sheen is seen. Likely organism – Ecoli
- Killed microorganism in vaccine for children is given for – whooping cough
- Dental abscess is dormed after trauma and wiring. Likely organism responsible is – S.mutans
- The most potent toxin produced by strep pneumonia is – pneumolysin
- Bacteroids fragilis is best characterized by – Foul smelling discharge
- Brucellosis is transmitted by – unpasteurized milk

- Following is true regarding sterilization – autoclaving is heating objects at 121 degrees at 15 psi for 3 min
- Which of the following method is used for cleaning face mask – Ethylene oxide sterilization
- 8 years old girl presents with complaint of dysmorphic appearance of face for the last few months. On examination right sided mandibular mass is noted. Likely cause – EBV
- Disinfection used in OT for hand washing and scrubbing – Chlorhexidine
- A boy presented with fever, hypotension and rash all over body and extremities. He gave history of abdominal pain and vomiting. Likely cause is – Ertyhrogenic toxin
- Period between remission and reappearance of symptoms – latent period
- Common cause of exotoxin food poisoing – staph. Aureus
- Child presented with sore throat, fever, stridor. Which of the following investigation will be done for diagnosis? – Throat swab (if option of throat swab + blood culture is present then go for that)
- Most common cause of meningitis – Streptococcus pneumonia
- Increase heterophilic antibody is seen in – Infectious mononucleosis
- Patient presented with step ladder fever and bodyaches. Which investigation should be done for diagnosis – Widal test
- Fungus that invades the sinuses and cause rhinosinusitis and thrombosis – mucor
- Follicular hyperplasia of lymphoid tissue occurs in – Toxoplasmosis
- Bacteria adhere to cell via – Pilli
- Steam at 100 C for 3 consecutive days called – Tyndilization > Insissipation
- Female patient suffering from UTI also develops systemic signs. Her WBC is greater than 15000. Likely diagnosis – urosepsis
- A lady while carving flowers in her clothes pricks her finger with needle. She develops signs of inflammation in distal interphalyngeal joint. If left untreated what will happen – paronychia
- Trachoma is best prevented by – Frequent facial washing
- 29 years old lady after returning from remote village suffered from mild watery diarrhea for the past 1 week. Her occult blood test was negative. She improved after a course of 2 weeks treatment. Likely diagnosis – Giardia
- Hepatitis B is transmitted via – Sexual transmission
- Nail infection associated endocrinopathy is likely due to – Candida
- A child is diagnosed to have pneumonia. A bacteria is found which is alpha hemolytic and optochin positive. Likely organism is – streptococcal pneumonaie
- A drug which block adenylcyclase and inhibits camp is used in the treatment of – vicrio cholera
- Pin worm disease in human is caused by – Ingestion of eggs (NOT larvae)
- Patient is having rash behind ears spreading to whole body – Measles (memorize this pattern of spread)
- Most common cause of acute pyelonephritis is – Ecoli
- Initial test for leprosy – Skin scraping
- Common cause of exotoxin food poisoning is – staph aureus
- After typhoid vaccine one must have – active immunity
- A 30 year old woman known IV drug abuser presented with chest pain, On examination percussion note was dull and she was not responding to ATT. Likely causative organism – pneumocystitis jiroveci
- A patient who is positive for infectious mononucleosis which organ is susceptible for injury – spleen (this is why they are advised to avoid playing high contact sports)
- Sterlization method kill bacteria but not spores. Likely causative organism will be – Clostridium tetani
- In diabetic patient after extraction of lower molar swelling is formed in neck and tonsil is pushed medially. Which organism is involved – Mixed aerobic and anaerobic

- A patient is presented with painful ulcers on labial mucosa which are 2 to 3mm in size. Examination shows halo Surrounded by red Issue Previous history is also present Likely cause is - Aphthous ulcer
- A middle age male presented with lower limb weakness followed by upper limb Weakness. There is history of Use of mix fruits In tin pack Likely diagnosis is - Gb syndrome
- 40 years old male after drinking water from stream developed Watery diarrhea and remitted in 3 Weeks Two children are also affected. Likely cause would be - Giardia
- Rocky mountain spotted fever is caused by which organism - Rickettisia rickettsiae
- Baby have highest risk of systemic candidacies after - Indwelling catheter
- A patient is presented with lymphadenopathy and on biopsy granuloma is seen What other
- Test will be done for confirmation of diagnosis - Specimen for AFB
- Opportunistic organism causing Infection after kidney transplant - Polyoma JC virus
- Cause of Meningitis in 6 months to 2 Years old boy - Streptococcus pneumonia
- Most important for diagnosis of streptococcal pneumonia - Optochin sensitive
- Cystticercosis is caused by Ingestion of - ovum of taenia solium
- .In Pakistan conjunctivitis is mainly by - Virus
- Diagnostic test of trichomonas virginals is - Vaginal Smear
- Primary TB focus is - Heal calcific nodules
- Pseudomonas acts by - Exotoxin A
- Meningitis in new boom is caused by - streptococcal Lancefield group b
- Corona virus we are facing name is a new strain. So what it is named - SARS corona virus 2
- Easiest way to demonstrate gonococci - Gram staining
- In day care Institution children have developed abdominal cramps loose stools with blood Non motile non lactose fermenting rods have been seen, diagnosis: Shigella
- .Regarding streptococcal pneumonia true statement is - Commonly cause meaningitis
- AIDS defining illness is - Cryptococcus neoformans
- Toxoplasmosis is - Parasite
- Neutralizing antibodies are present in 95% of population. Best term used for this - Immunogenicity
- Quartan malaria caused by - plasmodium malariae
- After start of clindamycin ,patient developed diarrhea likely - Clostridium difficile
- .A patient with AML undergoesbone marrow transplant. He is now presented with cough fever and histology shows large cell with intracytoplasmic Inclusion bodies .likely diagnosis is - CMV
- What type of growth pattern is seen for corynebacterium diphtheria? - palisades pattern
- Bacillus anthrax will grow on which medium - Anthrax Blood agar (and its capsule is stained with mcfadyean stain)
- A patient with history of abdominal surgery 10 year ago h now presented with features of cirrhosis He is diagnosed with hepatitis which is likely - Positive single stranded
- Child is presented with mulberry molars saber shin Hutchinson teeth. These are manifestations of - Syphilis
- Gram negative rods non lactose fermenting growing on mcconkey agar is - Proteus
- Tetanus toxins is - Neurotoxin
- Gene therapy was first done with which virus - Adenovirus
- A young male is presented with uretheral discharge. On Examination pus cells are seen but no organism which method is best for culture - Mccoy cell line
- Best way to get urine culture is - CLED agar with 1 ml urine

- A patient is presented with fever and vomiting On examination neck stiffness is present and he is also having rash around his ankles. CSF examination shows Increase proteins and neutrophils. On the basis of gram stain doctor started antibiotics. What is likely - Gram negative diplococcic
- A person got prick and finger became reddish, tender red an dlater pus developed at that site. Culture showed staph aureus. By which mechanism it escaped phagocytosis – Protein A
- A young girl is presented with difficulty in breathing Her vitals are normal except respiratory rate is increased Auscultation is normal On chest x-ray there is hilar lymphadenopathy on right side and nodular lesion in middle lobe of the same side of lung What is the cause: Mycobacterium tuberculosis
- Common cause of otitis media in children - Streptococcal pneumonia
- A child presented with vesicles on palm, foot and mouth. Virus responsible is - Single stranded linear non enveloped
- A female presented with "slapped cheek" . This infection is by - Single stranded DNA virus
- A patient presented with fever. On examination relative bradycardia and hepatosplenomegaly is present blood complete picture shows absolute neutropenia Likely Diagnosis is - Typhoid
- Australian gardener presented with chest pain. On x-ray calcification and consolidation are seen Likely diagnosis is - Aspergillosis
- A patient presented with vomiting and abdominal pain within 6 hours of eating rice from Chinese restaurant. Likely organism: Chinese restaurant likely is bacillus cereus
- Streptococcal pneumonia is type - Diplococci (lancet shaped)
- Female is presented with UTL. Gram negative and catalos positive non lactose fermenting Bacteria is diagnosed. Likely organisms - Proteus mirabilis
- Patient sustained cut on thigh and after week presented with foul smelling wound and crepitus. It is due to - Ischemic necrosis
- Patient presented with loose motion 20 episodes per day .Organism with shooting start motility - lt Grows on Colorless colonies macconkey agar
- Why mycobacterium Is not stained by gram stain - Thick lipid layer
- 10 years old girl presented with fever and coryza. A maculopapular rash is starting to Spread from head to trunk - Likely diagnosis Rubella
- A patient presented with high grade fever and clear blisters on back. Likely diagnosis: Varicella zoster virus
- Fungus resistant to echinocandin – Cryptococcus
- Fumingation is done in case of – Influenza > cardiac surgery OT where increased post op infections occur
- 10 years old boy is diagnosed with meningococcal meningitis. Her mother is worry that regarding which route he has acquired this infection – Airborne
- A drowsy 85 year old man who had splenectomy 20 years ago is brought to the hospital with diagnosis of meningitis. Which of the following bacteria will be most likely isolated from CSF? – Strep pneumonia
- Which of the following can directly induce antibody response without involvement of helper T cells? – Rabies immunoglobulin
- Most common spread from patient to doctor in OPD – H.influenza
- Sulfur granules contain which of the following – actinomyces
- A patient in ICU with CVP passed develops rash around it. Cultures show catalase positive and coagulase negative organism. What is the mechanism by which organism causes intravascular symptoms? – Exopolysaccharide
- A known diabetic patient is suffering from fungal sinusitis with fungus invading lamina papyracea causing extensive fungal damage. Likely organism – Mucormycosis

- Least resistant to destruction – fungal spore
- Corynebacterium diphtheria stains most commonly – methylene blue
- Streptococcal pneumonia on histology – Diplococci in shape
- Common parasite infection in AIDS – Cryptosporidium (this is more common that Cryptococcus which causes meningitis)
- Thymus is: Rich in lymphocytes
- RBC's are: Have glycolytic enzymes activity
- Myelin in CNS is formed by: Oligodendrocytes
- Lymph nodules are present in: Lymph nodes
- Stratified squamous epithelium is present in: Palatine tonsils
- End arteries are presented in: Heart
- Strongest layer of small intestine is: Submucosa
- Valve less vessel is: Superior vena cava
- Regarding esophagus histology: Has stratified squamous epithelium in upper 1/3
- Epithelium of nephron is derived from: Mesoderm
- Lamia propria of vagina is made up of: Elastic fibers
- End hard keratin is found in: Nail
- True about smooth muscle is: Gap junctions are present
- Flow of current through junctions occur in which muscle: Cardiac muscle
- Erythropoietin is secreted from: Peritubular interstitium of kidney
- Medullary rays are presented in: Cortex
- Which protein maintains red cell shape? Spectrin
- Regarding collagen: Lightly Stain with Eosin
- Which of the following is absent in Axon hillock? Rough endoplasmic reticulum
- Functional layer of endometrium consist of: Stratum compactum and stratum spongiosum
- Epithelium of ovary is: Simple cuboidal
- An organ lined by stratified squamous epithelium with increase cellularity, vascularity and elastic tubular glands in lamina propria is: Vagina
- Which structure has 3 layers of muscles? Fundus of stomach
- A 14 years boys come with the complaint of his abnormal height and secretion from mammary glands. Histology of pituitary will show: Increased Acidophilic cells
- Which is not "Major Basic Tissue"? (epithelium, nerve, bone and muscle are major basic tissue) - Blood
- Which one is absent muscles? Glucose 6 phosphatase
- Regarding kidney, which sequence is correct? Renal > interlobular > arcuate > interlobar > afferent arteriole > glomerular
- True about appendix is: Does not have tenia coli
- What is not presented in bowman's capsule? Stratified epithelium
- In habitual smoker the epithelium will be: Pseudo stratified epithelium with patches of stratified squamous epithelium
- Axon does not contain Nissle substance
- Smooth single layer of epithelial cells is present around: Primary follicle

- Smooth muscles are: Mostly arranged in circular and longitudinal layers
- PDGF is secreted from which part of platelets? Alpha granules
- Which cells produce antibodies? Plasma cells
- Heparin is released from which cells? Mast cells
- Epitheloid cells in granulomas are formed by which cells? Macrophages
- What is true about thyroid? Epithelium changes shape according to state of activity
- What is true about pituitary? No portal vessels between hypothalamus and post pituitary
- Most abundant phagocytic cells in circulation are: Neutrophils
- Most unlikely about glomerulus is: Has stratified epithelium
- RBC's cell membrane contains: Myocin
- Appendice epiploic are presented in: Rectum
- Germinal epithelium of ovary contains: Cuboidal epithelium
- Columnar epithelium lines which structure? Uterine Tubes
- Submucosal glands are presented in: Duodenum
- Regarding histology of vas deference: thick layer of muscle
- Nissel bodies are: RER
- In which phase of cell division, the chromosomes are arranged in chromatids? Metaphase
- Simple columnar epithelium is the lining of: Uterine tubes
- Stratified squamous epithelium are founded in: Secretory ducts of salivary gland
- Following has lymphoid tissue with surrounding stratified squamous epithelium: Palatine tonsils
- Which among the following has most mucus acini? Sublingual glands
- Calcium releases in muscle from: Sarcoplasmic reticulum
- In which stage maximum hemoglobin production occurs? Late normoblast
- True about monocyte is: Leaves blood to enter tissues and then re-enters blood
- Average life of gastrointestinal epithelium is: 2 – 7 days
- Regarding histology of nephron which part is in the medulla? Loop of Henle
- Simple squamous epithelium lies: Loop of Henle
- Fibrocartilage is presented in: Intervertebral discs
- True epithelium is not founded in: Blood vessel
- In mucosal changes in chronic rhinitis, which cell increases? Goblet cells
- Mast cell beneath epithelium: Releases histamine and heparin
- Microscopic structure of pituitary gland reveals that: Chromophills have little affinity for basic dyes
- True about platelets is: Has no nucleus
- Which of the following lymphoid structure does not contain lymph nodules? Thymus
- Lymph filtration in spleen occurs in: Trabecular
- Basophills of cell is due to: RER
- O2 and H2O2 are produced in neutrophil from: Peroxisome
- Epithelium of larynx is: Pseudostratified columnar ciliated
- Which cell release extracellular fibers and amorphous substance? Fibroblasts

- Which cells is not a part of epidermis? Pacinian corpuscle
- Which of the following is numerous in apical mitochondria? Ciliated cells

Small intestine brush border does not play role in digestion by one of following reaction: Protects epithelium

- True regarding platelets is: Formed by fragmentation of megakaryocytes in bone marrow
- Neurons in olfactory tract are: Bipolar
- Which cell produces Histamines? Mast cells
- Organ having subscapularis & receives afferents from: Palatine tonsils'End arteries are presented in: Spleen

A patient present with enlarged mass in front of the neck. Biopsy of thyroid gland is performed which metastatic change: Simple Cuboidal epithelium

- What is not present in bowman's capsule? Stratified epithelium

In habitual smoker, the epithelium will be: Pseudo stratified epithelium with patches of stratified squamous epithelium

- PDGF released from which organelles of platelets? Alpha granules
- Simple columnar epithelium is present in: Choroidal plexus of ventricles
- True about cytoskeleton is: Maintains the integrity of the cell
- Newly formed elastic cartilage looks yellow & dense because of: Large no of Elastin fibers
- Compact bone contains: Osteocytes in the lacunar spaces
- Which part of the respiratory tract contains mucous glands? Nasal cavity
- Skeletal muscles have: Multiplenuclei located at their periphery

Surface which are prone to great amount of friction has: Stratified squamous keratinizing epithelium

- Surfactant is produced by: Pneumocytes 2
- All those structure in contact with air have following epithelium: Pseudostratified columnar epithelium
- Immune mechanism of liver lies in: Kuffer cells
- Neurohypophysis contains: Pituitocytes
- Primary ossification center is: Diaphysis
- Microtubules are part of: Centrioles
- One slide of a specimen shows stratified squamous epithelium with vascular smooth muscle and elastic fibers most probably the specimen is: Vagina
- Which cell produces antigen to immature B lymphocytes in the ileum? Microfold cells
- The Islet of hematopoiesis in utero is: Yolk cell
- Regarding histology of gastrointestinal tract, which is inappropriate: Peyer's patches are present in submucous layer of duodenum
- Regarding epithelia and gland which is appropriate? Simple squamous epithelia found at places where gaseous exchange occurs
- Mucosa of gall bladder is: Simple columnar
- Whip like ciliary movement on surface of cells is seen in: Fallopian tubes
- Hepatic pedicle consists of: Hepatic artery, portal vein, common hepatic duct
- Bone is main store houses and supplier of: Calcium, magnesium, phosphate

- Within kidney renal vessels run in: Columns of Bertin
- A lymphoid structure in which lymphatic are received in the sub capsular sinus: Lymph node

Most likely histological feature of the compact bone is: Most osteon are oriented in the long exist of the bone

- Following is true regarding fibrocartilage: Present in intervertebral disc
- Histology shows tubular structure with pseudo stratified epithelium and thick muscle wall most likely structure is: Vas deference
- Osteoclast cells are derived from which cell type? Monocyte
- Urothelium liens all except: Collecting duct
- All of the following cells types contain the enzyme telomerase which protects the length of telomeres at the end of chromosomes, except: Somatic
- Length of spermatozoa is: 50um
- In dividing cells, spindle is formed by: Tubulin
- The principal factor causing the rupture of the griffin follicle is: Neccrobiosis of the over lying tissue
- Pigmentation in upper dermis is due to: Increase activity of melanocyts
- Heterophile antibody is seen in: Infectious mononucleosis
- Regarding the blood supply of the bone, which one is true? Epiphyseal arteries supply the ends of long bone
- Cells of simple columnar epithelium are connected by: Tight junctions only
- Hyaline changes occur by deposition by: Amyloid like material
- Regular arrangement of lamella found in: Compact bone
- Type of muscle in heart: Striated muscle
- Type of collagen present in dermis is: Type 1 collagen
- What is true about Hyaline cartilage? Precursor of endochondral bone formation
- Which of the following bones develops by intramembranous ossification? Clavicle
- True statement regarding esophagus histology: Has stratified squamous in upper 1/3
- The diameter of blood capillaries and RBC is (in series): 7.5um
- What is true about pseudo columnar epithelium? All cells are at base
- Serous gland with acini: Parotid
- Axon arises from conical shape part of neuron cell body called: Axon hillock
- What is true about pinna is? Elastic cartilage
- Howship lacunae contain: Osteoclasts
- Epithelium of conjunctive: Stratified columnar Epithelium
- Hylaine cartilage in: Precursor of endochrondral bone formation
- Regarding histology of gastrointestinal tract, which is inappropriate: Peyer's patches are present in submucous layer of duodenum
- What is true about hyaline cartilage? Collagen fibres are not visible
- Columnar epithelium is found in: Fallopian tube
- Urothelium is the example of: Transitional Epithelium
- A female present with mass in front of neck. Biopsy shows no malignant changes. The mass will contain which of the following? Cuboidal epithelium

- Regarding ossification all of the following are true except: In intramembranous ossification, bone is formed from cartilaginous model of the bone
- Anterior epithelium of cornea is: Stratified squamous non keratinized
- In acanthosis target layer is: Spinosum
- Medullary rays contain? Collecting ducts
- Regarding epithelium and Glands: Simple squamous occurs at sites of Gaseous exchange
- 25 years old after 1 month after marriage, presented with severe pain in right iliac fossa. On laparoscopy, right fallopian tube was swollen and red, about to burst and salpingectomy was done on microscopic examination the specimen will contain: Neutrophills
- Liver sinusoids: Contain kupfer cells
- Purkinje cells are typically present in: Cerebellar Cortex
- Epithelium of nephrons is developed from: Mesoderm only
- Cells which contain sense granules and have IgE antibodies on their IgE antibodies on their cell membrane are: Basophils
- Epithelium of preterminal bronchiole: Simple coloumnar epithelium
- Numerous apical mitochondria: Ciliated cell
- Fibrocartilage: Present between intervertebral discs
- Histology of Ureter: Small lumen tubular stratified lined by transitional epithelium with compete muscular coat
- Simple columnar epithelium with Goblet cells and submucosal lymphoid tissue: Ileum
- Lanugo hair is present in: Fetal hair
- Regarding transitional epithelium: Stratified with outer cells bigger and rounder
- Which of the following have sub capsular afferent sinuses? Lymph nodes
- Fibrocartilage: Present between intervertebral discs
- Soft keratin is found in: Stratum corneum
- True statement regarding bone: Circumferential lamella arrange around central canal
- Elastic fibers are thickest in: Aorta
- During a histology practical test amedical student obsere undermicroscope a tubular structure having small lumen lined by transitional epithelium supported by connective tissue lamina propria and three layers of smooth muscle with adventitia as outer mos layer, what anatomical structure is it? Ureter
- At basal side of semihefeous tubules, which of the following cells form mature sperm cells? Type A spermatogonia
- Cells of simple columnar epithelim are connected by: Tight junctions only
- A patient present with enlarged mass in front of the neck. Biopsy of thyroid gland is performed which reveals no metastatics change, which type of epithelium is found in thyroid: Simple cuboidal epithelium
- Anatomical structure which characterized conduction of heart: Gap junctions
- On H & E Staining a student sees the hallow structure around the nucleus. What it could be? Lysosomes
- Highest sodium channel concentration present: Node of ranvir
- Reticular connective tissue is present in: Tonsil

- Which branch of renal artery supplies network around glomerulus? Interlobular
- Peri capsular sinuses in: Lymph node
- Microscopic slide of liver shows portal vein hepatic artery and bile duct a periphery and central vein in the center. Most likely structure is: Hepaticacinus (Liver acinus)
- Strongest layers of small bowel: Submucosa
- Chronic hepatitis histology on microscopy shows: Fibrosis
- What separate antigens from develops T cells? Thymus blood barrier
- Germinal follicles present in: Cortex of lymph node
- Which structure modifies its lining cells? Bowman's capsule
- Basement membrane possess negative charge due to? Laminin
- A medical student was studying a microscope slide of transitional epithelium. He noticed unduly thick and darkly stained luminal plasma membrane of the surface cells. It is most likely due to: Aggregation of cytoskeletal elements
- Columar epithelium lines: Urethra tube
- Cells with irregular foot processes present in interneuron space and around blood vessels in CNS are: Protoplasmic astrocytes
- Epithelium of soft palate: Stratified squamous non cornified
- True regarding bone: Osteoid is the unmineralized bone
- Which of the following helps in formation of the bones? Osteoblast
- Which intacellular junction is like a spot weld between cell and the base? Hemidesmosome
- True regarding histology of thin ascending limb of loop of Henley: Squamous epithelium
- Sesamoid cartilage found in: Nasal septum nasal septum and larynx both have sesamoid cartilage
- Star shaped lumen is of: Ureter
- Articular cartilage most commonly: On epiphysis of long bones in synovial joints
- Epithelium of small intestine: Simple coloumner
- Stomach circular muscle become thicker: Gastro duodenal Orifice
- Brush border is present in which part of nephron? PCT
- Axons: Carry impulses away from the cell bodies
- Most abundant glial cells in gray matter: Protoplasmic astrocytes
- In bone new matrix and fibers are formed by: Osteoblast
- Shaft of hair is mainly composed of: Cortex of hair
- The distinctive arrangement of collagen fibers in the skin is predominantly found in: Reticular layer
- Regarding the filliform papillae: These are present at dorsum of tongue up to the tip
- Which type of collagen present in skin? Type 1
- Which of the following is absent from the axon? Nissls granules
- Histology slide shows inner circular and outer longitudinal arrangement with skeletal and smooth muscle fibre. Most likely it is which structure? Middle esophagus
- Which of the following does not have stratified squamous non- keratinized? Nasopharynx
- Most diagnostic of fallopian tube: Simple columnar ciliated
- True regarding stratified columnar is: Nuclei lie at same level

- Collagen arranged in layers in: Reticular layer
- SER present abundantly in: Gonadal tissue
- Based on cell histology which of the following is most different: Osteoclast
- Firbo cartilage contains which fibers: Collagen
- Serous gland with single duct: Parotid
- Pericytes are present in: Small blood vessels
- Epithelium of vas deferens: Pseudo stratified ciliated
- Hyaline and elastic cartilage both is present in which of the following? Larynx
- What makes intestine to look as small block like vertebrae? Haustra
- True regarding visceral smooth muscle: Sustained but slow contraction
- Endometrium has: Simple tubular gland
- What is present around individual muscle fiber? Endomysium
- Epithelium found upon surface exposed to friction, which it serve to protect against mechanical injury: Stratified squamous keratinized
- True regarding collagen: Fibers not visible
- A cell active in protein synthesis will have: Dense RER
- True regarding sweat gland: Tubular structure
- Submucous brunner gland present in which part of GIT? Duodenum
- Numerous un-named salivary glands in mouth, in which layer in oral cavity? Submucosa
- Immature T cells are present in: Deep cortex
- Tubular structure having transitional epithelium connective tissue and 3 layers of muscles is: Ureter
- Water proofing of skin is done by: Keratin
- Which of the following have no basement membrane? Ependyma
- Reticular connective tissue present in: Tonsils
- Which of the following is absent in node of Ranvier? Myelin sheet
- Difference between proximal tubules and distal tubules: Proximal has brush border
- Chondrocytes present in: Mature cartilage
- Regarding articular cartilage: Covers epiphysis of long bones at joins
- Lymphoid organ with absorptive epithelium have mucosal submucosal fold is: Appendix
- Stratified squamous epithelium is on: Uvula
- Columnar epithelium with crypts in it and smooth muscle: Body of uterus
- Basement membrane contains collagen type: Type 4
- Oligodendrocytes are present in: CNS
- Lamellar appearance of bone under the light microscope is due to arrangement of: Collagen fibers
- Which structure is produced by basal bodies? Cilia
- Matrix and fibers are formed in bone by: Osteoblast
- Cells of simple columnar epithelium are adhered to each other by: Tight junction and adherent junction and desmosome (prefer option that says only tight junctions)
- Epithelium modification in small intestine: Microvilli

- Which is predominantly mucinous gland? Sublingual gland
- Connexins are a part of: Gap Junctions
- What is the sequence of layers of esophagus? Mucosa, submucosa, muscularis externa, adventitia
- Mecula densa cell histology: Taller cells with prominent nuclei and scattered mitochondria in periphery
- Epithelium of vocal cords: Stratified squamous
- Chondrocytes are cells of: Mature cartilage
- Which of the following is true regarding osteon? Osteon remnant is interstitial lamella
- Fibrocartilage contains large amount of: Collagen fibers
- Cells that increase in tape worm infection have following property: Pink granular cytoplasm
- Cell which forms all bone cell types? Osteo progenitor cells
- Extensions of the cortex into medulla are called: Renal Columns
- Collagen fibers: Stain lightly with eosin
- True regarding histological appearance of gastric parietal cells: Granular cytoplasm with basal nucleus
- Glomerulus is supplied by branches of which artery? Interlobular
- What is included in renal column? Interlobar
- Stratified cuboidal epithelium mostly in: Excretory ducts of salivary gland
- On histology many serous acini surrounded by connective tissue stroma most probably is: Salivary gland
- Regarding the fillform papillae: These are present at dorsum of tongue up to the tip
- Esophagus histology: Has stratified squamous in upper 1/3
- Ina lab slide being examined which shows 3 layers, intima, media, adventitia and narrow lumen, this slide of which of the following structure? Arterioles
- Glomerulus has: Single afferent arteriole
- Stratified squamous epithelium is present in: Epiglottis
- About bone: Newly laid unqualified bone matrix is called osteoid
- Regarding osteogenesis: Osteocytes lie in lacunae
- True statement regarding smooth muscles in GIT is: Inner circular outer longitudinal
- Mixed type of gland is: Submandibular
- Articular cartilage is mostly: Hyaline
- Stratified cuboidal epithelium present in: Salivary gland
- Minor calyx received fluid from: Papilla
- Blood supply to capsule of Kidney: Interlober artery
- Cells not present normally in pancreases: Mucinous cells
- Hyaline cartilage is present: Costochondral
- Elastic cartilage is present in: Ear
- Elastic cartilage is present in: Larynx
- True about cartilage: Can grow by appositional and transitional growth
- Broad shaped papillae having core of connective tissue: Fungiform
- Which of the following parts of respiratory tract contains mucosal gland? Trachea

- Chromosome maneuvering does not occur in: Asexual reproduction
- Histology of slide shows tubular structure with absorptive protective epithelium with lymphoid tissue in mucosa/submuscosa likely structure is: Appendix
- Organ having double folder epithelium ciliated and non- ciliated columnar epithelium outer longitudinal and inner circular: Uterus
- Chondrocytes present in: Mature cartilage
- Goblet cells are not present in: Tertiary bronchi
- Transition epithelium is: Surface cells are dome shaped
- Corneal epithelium is: Stratified squamous non-keratinized
- Ciliated pseudo stratified columnar epithelium is present in: Trachea
- A structure having special sense receptor having stratified squamous epithelium that is oval along with surface: Fungiform papilla
- Esophagus epithelium is: Squamous throughout columnar in pathological conditions
- Site of capture of foreign antigens in spleen: Marginal zone
- Bipolar neuron has: 1 dendrite, 1 axon
- Stapyhylococcus inoculated in tissue what role lymphatics play in generating immunogenic response to it? Drain extravascular tissue fluid if dissemination occurs
- Endoscopy in patient shows 1.5cm leision and histology shows loss of epithelium it is due to: Ulcer
- True regarding heart muscle histology: Intercalated disc
- Which vessel is formed by glomerular capillaries? Efferent arteriole
- True about kidney: Podocytes in visceral layer
- Fenestrated capillaries are maximum in: Kidney
- Continuous capillaries present in: Brain
- Intralaveolar cells are: Pneumocytes
- Which is considered embryonic connective tissue? Mesenchyme
- Which one of the following has smallest diameter? Alveolus
- Terminal bronchiole don't have cartilage this feature differentiate it form: Conducting bronchi
- Structure with longitudinal smooth muscle in adventitia is: Large size vein
- Similarities between pulmonary and skeletal capillaries: Protein Filtration
- Stratified squamous keratinized epithelium is present on: Filliform papillae
- Microvilli: Present in small intestine
- Cell binding, adhesive protein is: Fibronectin
- Gall bladder lacks: Simple columnar with microvilli
- In breast histology, main ducts divide into terminal ducts which open into: Lactiferous ducts
- Liver histology shows focus of portal tried in center and centrilobular vein on corner. What is the focused area? Portal acinus
- Mature bone contains: Calcium hydroxyapatite
- Collagen fiber in periodontal ligament is: Type 1
- In bones canals entering the medullary cavity in transverse and oblique fashion: Volkmans canal
- Bone strength depends on: Collagen to mineral ratio

- Different between spleen and thymus is: Splenic sinusoids
- Which cells are related to bone remodeling? Osteoblast and osteoclast
- Near the base of pyramid, which artery is present? Arcuate
- Stomach circular muscle become more thick in: Gastroesophageal orifice > pylorus > antrum
- Non-essential amino acid include - Tyrosine
- What is true about DNA - Double stranded in which two strands are antiparallel to each other
- hydrolysis of DNA gives - Phosphoric acid
- Which of following has highest cholesterol content - LDL
- Pyruvic acid is use as intermediate in which step of cell metabolism - Glucose to acetyl CO A
- Epinephrine norepinephrine and dopamine are derivatives of which amino acid - Tyrosine
- End of product of purine metabolism is - Uric acid
- What is most true among following - Messenger RNA has codon
- Deficiency of thiamine (B1) cause all except- Subacute degeneration of spinal cord
- If carbohydrates is separated from protein what will be fate- Aggregation and precipitation
- which of following does not have sulpha group -Threonine
- Tyrosine derivatives does not include - TSH
- Precursor of steroid hormone is -Cholesterol
- 1 gram of protein contains calories- 4 calories
- Genes are composed of -DNA
- chylomicrons contain - Fatty acid with vitamins
- Thiamine deficiency causes - Peripheral Neuropathy
- Richest in triglycerides is - Chylomicrons
- Energy liberated on complete metabolism of protein is - 4.1 k call
- Energy liberated on fat metabolism is - 9.1 kcal
- which one of the following most likely contains abundant cholesterol? - LDL
- Genetic disease mostly has pathology in - DNA
- What is end of product of glucose metabolism in the presence of oxygen - 2 molecule of pyruvate
- Benedict test is used for: Urine glucose test
- Essential amino acid is - Phenylalanine
- What is the end of product of glucose breakdown - Pyruvate?
- What should be given to increase vitamin -Green vegetables
- Bile acids are conjugated which amino acid to form bile salt -Taurine
- High energy compound is -ATP
- The end product of carbohydrate metabolism is - Pyruvate
- The highest content of triglyceride -LDL
- Following is not a phospholipid -Plasminogen
- A human being can survive without -Lipids
- Following amino acid is not Synthesized in body: Methionine
- DNA replication occur in: Interphase
- Following vitamin deficiency Cause homocystenuria B12 >B6
- VIT B 6 in involve in - Transanimation
- Micelles - Absorb fats in duodenum
- Which vitamin is used as coenzyme In fatty acid synthesis - Biotin

- Regarding glycolysis most appropriate Pyruvate is end of product of Aerobic and lactate of anaerobic metabolism
- Dry heat kills the bacteria by - Coagulation of protein
- virus damage the cell by - Altering the formation of protein
- Which one of the following lipo protein has highest protein content - HDL
- .Hypervitaminosis A causes - Scaly dermatitis
- Regarding vitamin k - Produced by intestinal bacteria
- Dietary fiber contain - Pectin
- Magnesium is stored in - Bones
- which one essential fatty acid - Lenoleic acid
- Source of folic acid is - Vegetables
- during fasting circumference of mid arm is decrease after one month due to - Decreased protein of body
- fatty acid a transferred from adipose to liver in form of - HDL
- Thiamine level is best monitored by - Transketolase level
- vitamin B12 and folic acid supplementation in megaloblastic anemia leads to the improvement of anemia due to - Increase in DNA synthesis bone marrow
- Nitric oxide synthase- Requires NADH, FAD, FMN & heme iron
- Phenyalanine is the precursor of: Tyrosine, epinephrine and thyroxine NOT melatonin
- Elasticity of the corneal layer of skin is due to presence of – keratin
- In dividing cells spindle Is formed by – tubulin
- Highest binding of iron is seen with – hemoglobin
- The primary role of chaperone is to help in – protein folding
- The protein ricj in basic aminoacids which functions in the pacakaging of DNA in chromosomes is – histone
- Whichh of the following is NOT a post transcriptional modification of RNA? Glycosylation (splicing, capping and polyadenylation ARE post transcriptional modifications)
- Serum total lactate dehydrogenase level will not be raised In – stroke (it will be raised in muscle crush injury, MI and hemolysis)
- Basic amino acids are – Lysine and arginine
- Sources pf the nitrogen in urea cycle are – aspartate and ammonia
- The predominant isozyme of LDH in cardiac muscle is – LD1
- All of the following hormones have cell surface receptors EXCEPT – thyroxine (other options were adrenaline, growth hormone and insulin)
- Which liver enzyme is predominantly mitochondrial? – AST
- Which of the following techniques is used for detection of variation in DNA sequence and gene expression? – Microarray
- After overnight fasting levels of glucose transporters is reduced in – adipocytes
- Insulin stimulates all except – ketogenesis
- Which vitamin deficiency lead to lactic acidosis? – Thiamine
- Which if non essential mineral – lead (sodium, manganese and iron are essential)
- Eukaryotic plasma membrane is made of all except – Triglycerides
- Acetyl CoA can be directly converted to fatty acids, cholesterol, ketone bodies but not – glucose
- Enzymes which transfer radical from one molecule to another are transferases
- During wound healing an dcollagen syntehesis the process which is promioted by ascorbic acid – hydroxylation of proline

- A patient has increased hepatic glycogen with normal structure of liver. No increase in serum glucose occurs after giving fructose. Which enzyme will be deficient? – Glucose 6 phosphatase
- Which one of the following amino acids is not synthesized by the human body and should be included in the diet? – Phenylalanine
- Which lipoprotein has negative coronary risk factor? – LDL
- The following neurotransmitter is not an amino acid – Histamine
- Most active gluconeogenesis results from metabolism of – protein
- Niacin deficiency causes – pellagra
- Euchromatin is the region of DNA relatively – uncondensed
- Protein associated with obesity – Leptin
- DNA replicate in which phase – interphase
- Wheat is a rich source of – thiamine
- Most common type of hyperlipidemia – Type 2
- Increase carbohydrate consumption will increase the demand of – Thiamine
- Which of te following is membrane bound enzume that catalyze formation of cyclic amp from ATP – adenylate cyclase
- Function exclusively linked with Vit E – germinal epithelilal protection
- Tyrosine derivative does not include – prolactin
- Source of nitric oxide is – arginine
- Shortening of chromosomes in mutation has occurred, enzyme responsible – Telomerase
- Skeletal muscle does not help in providing glucose to blood because of – lack of glucose 6 phosphate
- Most potent energy producing substance is – lipid
- Which contains the least amount of essential fatty acids – coconut oil
- Mostimmediate precursor of epinephrine is – norepinephrine
- Normal caloric value for an adult male is – 25-30 kcal/day
- Which contains more content of carbohydrate – rice
- Glycogen is – animal homopolysaccharide
- HDL contains which type of apolipoprotein – Apo a
- Lactose is – glucosylgalactose
- Glycogen – have 1,4 linkages in chain and 1,6 in branches
- Vitamins used in synthesis of acetyl CoA – pantothenic acid
- High energy bond found in – Long chain fatty acids
- 10-year-old child with lipid accumulations in skin of extensor surface of forearm. Blood cholesterol level is 800. History of same disease in mother and grandmother, mutation in gene of protein which causes cholesterol transport and metabolism – LDL receptor
- Structure of carbohydrate is – Disaccharide maltose
- In the presence of oxygen, end product of glycolysis is – 2 molecules of PA
- In vitamin A deficiency most important finding is – xerophthalmia
- Regarding galactossemia true statement is – galactose uridyl transferase deficiency
- Which amino acid causes cell injury – Glycine
- High fiber benefit is – increases cholesterol excretion from body
- Most drugs advised to be taken after meals to – reduce gastric upset
- Degradation of DNA releases – phosphoric acid
- Patient on total parenteral nutrition develops alopecia and dermatitis, likely cause is deficiency of – zinc

- Person taking carbohydrates in diet must also take – Vit B1
- Sulphur containing aminoacids – cysteine
- High triglycerides is in – VLDL
- Egg contains protein avidin. Eating raw eggs will lead to its deficiency which causes – decreased carboxylation
- Creatinine phosphokinase is absent in – liver
- Which one is essential amino acid – Threonine
- Minerals are least found in – tubers
- Zinc is necessary in – carbonic anhydrase
- Glycolysis – converts hexoses to pyruvates
- Urea is formed by liver in the body to get rid of – ammonia
- Highest cholesterol content is present in which of the following – egg
- Average body fat in male is – 18%
- The richest source of Vitamin D – Cod liver oil
- Glycolysis in RBC occurs through – anaerobic glycolytic (embden myerhof) pathway
- In female there is abnormal metabolism of amino acid. Which of the following amino acid will appear in urine – Tryptophan
- Enzyme which combines two and makes a single compound – Synthetase
- Alpha amino group of non essential amino acids is derived from – Glutamate
- Prolonged use of paraffin leads to deficiency of which vitamin – Vitamin A
- Highest energy content is present in – fats
- Patient has a deficiency of glucose 6 phosphatase. Which of the following will be present – hypoglycemia
- Which metabolite of fatty acid metabolism enters into kreb's cycle – acetyl coA
- Highest magnesium stores are present in – bone
- Essential fatty acid – linoleic acid
- Total parental nutrition - Decrease chances of infection via enteral nutrition
- Pyruvate is intermediate between - Glucose and acetyl coA
- Pellagera caused by deficiency of - Nicotinic acid
- Antioxidant vitamin - E
- During conversion of fibrinogen to fibrin, what will be detected in blood - Fibrinopeptidase
- Ketogenic aminoacids are - Lysine and leucine
- Alpha amino group of non essential amino acids is derived from - Glutamate
- Amino acid required for formation of neurotransmitter which is deficient in Parkinson's disease - Tyrosine
- Correct Sequence of Protein synthesis is – mRNA Cytoplasm, Ribosome, tRna, AminoAcids
- Type 1 hyperlipoproteinemia is due to - Decrease lipoprotein lipase
- Which vitamin will help in clotting process – vitamin C
- Recurrent renal stone associated with which amino acid abnormally - Lysine
- Tyrosine derivative does not include - prolactin
- Regarding L&D sugars D sugar has - OH on right
- Irreversible step in Glycolysis Glucose to Fructose-6-Phosphate
- Vitamin required for Fatty acid synthesis - Biotin
- What is produced in muscles - Creatinine
- Common cause of non obstetrical death in our country - Heart disease

- Hydrolysis of DNA release - Phosphoric acid
- A woman presents with corneal vascularization and fissures at corners of mouth. Which of the following will be absent - Riboflavin
- A Patient with deficiency of niacin and riboflavin will have Pellagra
- Correct about DNA - Euchromatin is transcriptionally active
- In urea cycle one ammonia group is derived from Glutamate and the 2nd ammonia group is donated by - arginine
- About pyruvate dehydrogenase which one is true - Pyruvate dehydrogenase present in mitochondria
- Food we take best described in term of constituents - Nutrients
- Which of term is needed to be broken down before digestion - Sucrose
- Highest energy in terms of Kcal/mole in the body is - adipose tissue
- In gene therapy gene is introduced into another organism using – plasmid
- Which of the following is lactic acid oxygen debt – 3.5L
- A 2-year-old boy presented with C/O diarrhea, stool pH was acidic and brush border of his intestine was lost. Which enzyme will be deficient? – Lactase
- A factor which is precursor to the carrier of 1 carbon fragments at various levels of oxidation – folic acid
- An obese patient on dieting lost 10kg of weight in 3 months. In order to access his nutritional status what is the most important? – Albumin and TIBC
- ALT and AST need which vitamin for its process – B6
- How many ATP are formed from 1 NADPH? – 2.5
- A child presented with blindness and mental retardation. On histology his lylosomes show a deficiency of hexosaminidase A. The child is suffering from? – Tay Sach's disease
- Person was doing his lipid profile. He had burger and fries before giving the sample. Plasma was centrifuged, the white puffy part of plasma was due to – chylomicrons
- In PKU phenylalanine is not converted to – tyrosine
- Glucokinase present in – liver
- Pka of phosphate – 6.8
- What is source of 2nd amino acid from urea cycle – aspartate
- Which of the following contains the maximum amount of sodium – soup
- Glutamate transaminase and alanine transaminase require – vitamin B6
- DNA in physiological state is present in – B form
- Chylomicron and triglycerides are both increased in – Type 1 hypercholesterolemia
- Bile salts cause – Digestion and absorption of fats
- Metabolite for ketone body synthesis is – Acetoacetate
- For checking vitamin status most cost effective will be – clinical assessment
- Ketogenic amino caids are – leucine and lysine
- Glutamate and aspartate need – biotin
- Which vitamin help in iron absorption – Vitamin C
- Iron should be taken for best absorption – with orange juice
- Cardiomyopathy due to deficiency of – thiamine
- Starvation – increase urine nitrogen excretion
- Nutritionists will advise which food for vitamins – Vegetables
- Amino acid in DNA is – histidine
- Which vitamin is responsible for protein metabolism – Vit B6
- Formation of coenzyme A requires – pantothenic acid

- Enzyme which convert ADP to ATP in glycolysis – Pyruvate kinase
- High energy required to melt DNA is due to – Guanine + cytosine
- Nucleotide composed of – nitrogenous base + 5 carbon sugar + phosphate group
- An obese person after eating burger has given blood test. Which of the following will show milky appearance – chylomicron
- Ketosis is due to – increased fat utilization
- Lipid contains mainly – carbon (Don't choose phosphate it's a common mistake)
- Amino acid having role in non essential amino acid – glutamate
- Sorbitol is – sugar alcohol
- Tyrosine derivative does not include – prolactin
- Smell of fat turned rancid is due to – volatile fatty acids
- A child presents with bilateral cataract and seizures. There is history of sibling death at 1 and a half years. Which test should be done – Urine for reducing sugar
- Bulk of acidosis in body is by – Protein catabolism
- Transducers are enzymes which – convert one form of energy into another form
- Kidney stone due to oxalic acid is formed by which amino acid? – Glyine
- Fanconi syndrome occurs in proximal renal acidosis causes – glucosuria
- Enzyme works by – decreasing activation energy
- Common enzyme in glycolysis and HMP shunt pathway – glucose 6 phosphatase
- Which of the following is case of genetic disease – DNA
- Active genes in human cells are – 5-10%
- Leukoreduction of RBCs is done by – Inverted centrifugation
- Cellular vault is regulated by – apoptosis
- RBC will produce ATP with the help of glycolytic enzymes. Reaction takes place in – cytoplasm
- A child develops muscle cramps after running for a while. Which of the following should be given? – Low carbohydrate diet
- Which metabolic disorder causes black colour urine – alkaptonuria
- During prolonged fasting, major control rate of gluconeogenesis is – alanine in blood
- Which of the following has highest energy reserves – triglyceride in adipose tissue
- Enzyme responsible for glucoronidation of bilirubin – Glucoronosyl transferase
- Vitamin that should be taken with protein diet – Riboflavin
- Enzyme responsible for cutting down DNA size – restriction endonuclease
- Proteolytic activity of enzyme trypsin involves which amino acid – carboxyl terminal size of lysine or arginine
- Patient presented with xanthoma and corneal arcus, which test should be done – Lipid profile ONLY
- Type 1 hyperlipidemia is due to – lipoprotein lipase deficiency
- Characteristic of fanconi anemia – glucosuria
- Riboflavin reacts with phosphoric acid to form – FMN
- Metabolic response to trauma, skeletal muscle responds by – increased proteolysis
- Von Gierke's disease is due to deficiency of – glucose 6 phosphatase
- In glycogen metabolism enzyme involved is – glycogen phosphorylase
- Defect in which collagen leads to Ehler's Danlos syndrome vascular type – Type 3 collagen
- Deficiency of niacin causes – lesions in CNS
- In type 1 hypercholestrolemia what is increased – Chylomicron and triglyceride

- A patient is having glycogen storage disease in which glucagon is high while glucose level remains the same even after giving fructose to patient. Which enzyme is defective – Glucokinase
- Which amino acid of hemoglobin acts as buffer and accepts hydrogen ions? – Histidine
- A person with family history of hyperlipidemia is presented for for checkup of lipid profile, which is worst for heart – LDL
- Porphyrin binds with which protein in plasma – albumin
- LDL receptors deficiency is in which disease – Type 2 hyperlipidemia
- Raised LDL is present in – Type 2 hyperlipidemia
- Heavy B band on lipid electrophoresis is due to - LDL, VLDL
- Maple syrup urine disease is due to deficiency of – alpha ketoacid dehydrogenase
- What is deficient in hyperlipoprotenemia 1 – apo C2
- Glycogen has 1-6 branching linkage; which enzyme will help in breakdown – phosphorylase
- Gaucher disease is caused by deficiency of – beta glucosidase
- Pregnant lady at 20 weeks of gestation should take diet high in - calcium

Sterilization

Important points

1. For disinfection hands should be washed with = alcohol with chlorhexidine
2. Operating room cleaned after surgery of HIV patient = 2% gluteraldehyde
3. Dry heat kills bacteria by = oxidation
4. Moist heat kills bacteria by = coagulation of proteins/ denaturation
5. Spores = killed under 121c for 15min in autoclave
6. Spores should be disinfected by = dry heat at 161c for 1 hour
7. Insecticidial = phenol, sodium hydrochloride derivative of salicylic acid (not soap)
8. Heat labile instruments best sterilized by = ethylene oxide gas
9. Bronchoscopy performed, best method to disinfect the endoscope is by = 2% gluteraldehyde for 20 min
10. Clean floor of OT after HIV patient surgery = 2% gluteraldehyde
11. While working in ICU what you need to do to prevent iatrogenic infections = frequent/ extensive handwashing
12. Cystoscope and endoscopy sterilization at 100c for 20min = tyndilization
13. Autoclaving is = heating objects at 121c at 15psi for 3min (preferably 10-15min)
14. Tissue damage by ionizing radiation is due to = formation of free radicals
15. Method of face mask sterilization for prevention against organisms is by = ethylene oxide

(Disinfection = Luke warm water, soap and water
Sterilization = ethylene oxide gas
In anesthesia given in statement = ethylene oxide sterilization)

16. More resistant to sterilization = prions (not spores)
17. Gamma radiation use for sterilization of which instrument = syringes
18. 10% formaldehyde is used for sending biopsy = to prevent autolysis
19. boiling is a method of = disinfection (not sterilization)
20. sterilization of disposable syringes is by = gamma rays
21. form of cold sterilization = gamma rays
22. Milk = pasteurization

(56C' for 1 hour
62C' for 30min
72C' for 15 min and then cooling it = flash pasteurization)

23. About dry heat

(160C' for 2 hour required
170C' for 1 hour
180C' for 30 min)

24. Sterilization of burn wounds = Silver sulfadiazine

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PATHOLOGY – 2014

Q1. 7-month pregnant female with chronic itp, now having ecchymosis and epistaxis, her platelet count is 5000, and she is on full dose of steroids, what is next best treatment?
A. Splenectomy
B. Give i/v immunoglobulin
C. Plasmapheresis
Ans. B

Q2. Liver damage occurred; bi-nucleated cells were found which are due to:
A. DNA without histones
B. Histones without DNA
C. Karyokinesis without cytokinesis
Ans. C

Q3. Child is on antimalarial drugs, now LFTs are deranged with increased unconjugated bilirubin:
A. G6PD deficiency
B. Black water fever
Ans. A

Q4. A child presented to OPD with 104 fever for the last 4 days. He has been passing cola colored urine for the last one day. He has been on anti-malarial too. His LFTs are deranged with increased unconjugated bilirubin. What is the most probable diagnosis?
A. Drug induced jaundice
B. Black water fever
C. Paroxysmal nocturnal hemoglobinuria
D. Hemolytic uremic syndrome
E. G6PD
Ans. E

Q5. Which of the following has the best prognosis?
A. Acute promyelocytic leukemia
B. AML
C. ALL
D. CLL
Ans. CML >ALL

Q6. Philadelphia chromosome translocation 9:22 is present in which of the following?
A- CML
B- ALL
C- AML
D- CLL
Ans: A

Q7. CML chromosomal abnormality is:
A- 8:21
B- 9:22
C- 7:21
D- 14:18
Ans: B

Q8. PAS +ve organism is:
A. Spirochete
B. Bacteria
C. Fungi
D. Virus
Ans. C (PAS demonstrates the polysaccharides cellulose and chitin found in cell walls of fungi. But remember bacteria Tropheryma Whippeli causing Whipple's disease is also PAS positive)

Q9. Osteomyelitis of dental procedure caused by:
A. Staphylococcus aureus
B. Streptococcus
Ans. A
OR
Q. Patient after dental Tx have organism:
A. Streptococcus
B. Staphylococcus
C. Fungus
Ans. A (strep viridans)

Q10. Which is slow growing thyroid tumor?
A. Papillary
B. Medullary
C. Anaplastic
Ans. A

Q11. Which is more aggressive?
A. Squamous cell carcinoma
B. Basal cell ca
C. Melanoma
Ans. C

Remember:
Most aggressive tumor- Melanoma
Locally malignant- BCC

Q12. Epithelium of conjunctiva:
A. Stratified columnar
B. Stratified squamous
Ans. A

Epithelium of cornea	Non keratinized stratified epithelium
Epithelium of conjunctiva	Stratified columnar
Epithelium of ovary	Simple cuboidal

Epithelium of membranous urethra	Non ciliated pseudostratified epithelium
Epithelium of choroid plexus	Simple cuboidal
Epithelium of alveoli	Simple squamous
Epithelium of gallbladder	Non ciliated simple columnar
Epithelium of ductus of sweat glands	Stratified cuboidal
Epithelium of PCT	Simple cuboidal
Epithelium of uterus	Simple columnar
Epithelium of Palatine tonsils	Keratinized stratified squamous
Epithelium of oral oropharynx	Non keratinized stratified squamous

Q13. Pseudostratified columnar ciliated epithelium?
A. Trachea
B. Esophagus
Ans. A

Q14. Organ with cuboidal epithelia, filled with follicle is?
A. Thyroid gland
B. Parathyroid gland
Ans. A

Q15. Free radicals of ionizing radiation have their main effects on
A. DNA of the cell.
B. Cell membrane.
C. Golgi apparatus.
D. Mitochondria.
E. Nucleolus.
Ans. A

Q16. UV rays cause?
A. Cataract
B. Peripheral neuropathy
C. Teratogenesis
D. Lung cancer
Ans. A

Q17. Most important for malignancy:
A. Inc N/C ratio
B. Metastasis
C. Invasion
Ans. B

Remember: For malignancy = Metastasis > invasion > N/C ratio

Q18. Organism that lacks geimsa staining?
A. Legionella
B. Mycobacterium leprae
Ans. B (because it is acid fast bacillus)

Q19. A person went to Thailand and presented with diarrhea which is watery and large in amount, in stool sample donut shaped cysts were found. Cause is:
A- Cryptosporidium
B- Cysticercosis
C- Amoeba
D- Staph Aureus
E- Histoplasmosis
Ans: A

Explanation:
Diarrhea in AIDS – Cryptospordium
Meningitis in AIDS – Cryptococus

Q20. Heinz bodies seen in:
A- Splenectomy
B- Sickle cell
C- Spherocytosis
D- G6PD
Ans: D

Explanation:
Heinz body and bite cells in – G6PD
Howel jowel bodies – Sickle cell and Splenectomy

Q21. A young man presents with low grade fever, anemia, and easy fatigue CBC shows blast cells with scanty cytoplasm that are CD-19 positive, probable diagnosis:
A. ALL
B. AML
C. CML
D. Hairy cell leukemia
Ans. A

Q22. Boy with palmar xanthomas and high cholesterol which type it is?
A- Hypercholestronemia 1
B- Hypercholesterolemia2 a
C- Hypercholesterolemia2b
D- Hype rcholesterolemia3
Ans: D (FA)

Explanation:
Pruritic xanthomas – Type 1
Achilles xanthomas – Type 2
Palmar xanthomas – Type 3
High TAG – Type 4
Commonest type of hyperlipidemia – Type 2 (LDL receptor defect)

Q23. In IV drug abuser what's the causative organism for infective endocarditis?
A. S aureus
B. S. viridans
C. S. pneumonia
D. S. bovis
Ans. A
Remember:
Abuser= aureus
Most common = viridans
Sub-acute = viridans
Acute = aureus
Post valve replacement within 60 days = epidermidis

Q24. About brucella investigation:
A. Blood culture
B. Sputum culture
C. Blood & sputum culture
D. Blood and bone marrow culture
Ans. D > A

Q25. Trichomonas vaginalis is best diagnosed on?
A. Dark microscopy
B. Direct fluorescent antibody staining
C. Serology
Ans. B
Explanation:
Culture (gold standard) > Wet mount on direct microscopy > Direct fluorescent antibody staining (DFA) > Acridine orange staining, PAP smear
Ref Parija S C, Text book of medical parasitology

Q26. Piece of organ\tissue which shows lymphoid aggregation?
A. Tonsil
B. Thymus
C. Lymph node
Ans. A
Also know

Q. Aggregation of lymphoid tissue covered by stratified squamous epithelium is:
A- Thymus
B- Spleen
C- Palatine tonsils
D- Lymph node
E- Pharyngeal tonsils
Ans: C
Explanation:
Lymphoid tissue and simple cuboidal Epithelium – Payer patches
Lymphoid tissue and stratified Squamous epithelium – Palatine Tonsil

Q27. Patient had Cough and X-ray shows Hilar lymphadenopathy, non caseating granuloma Present diagnosis is:
A- Sarcoidosis
B- TB
C- Syphilis
D- Leprosy
Ans: A

Q28. A child coming from village where there is improper sanitation, he'll have which hepatitis?
A. Hep. A
B. Hep. B
C. Hep. E
Ans. A
Remember: If pregnant lady came from village then = Hep E

Q29. A young boy presented with lethargy gum bleeding, anemia petechiae and epistaxis. On CBC all counts decreased. Best test to diagnose is:
A- CBC
B- Bone marrow biopsy
C- Coagulation profile
D- CT/BT
E- Electrophoresis
Ans: B

Q30. 22 Years old primigravida at 28 weeks' gestation. All scans are normal. Hb low and abnormal red cells seen. Next investigation?
A. Absolute values of mcv.mch.mchc.pcv
B. RBC count
C. Serum iron and serum ferritin
Ans. C

Q31. A patient contacted with hepatitis D virus on viral serology which of the following hepatitis would it require to have because it's weak in its own:
A- Hep. A
B- Hep. B
C- Hep. C
D- Hep. E
E- Hep. G
Ans: B

Q32. A histological section of a gland shows many acini lined with pseudostratified columnar epithelium embedded in

stroma, with smooth muscle in it. Which gland is this?

A- Prostate gland
B- Parotid gland
C- Submandibular gland
D- Seminal vesicle
E- Lacrimal gland

Ans: A (Fibromuscular stroma for prostate)

Q33. A patient presented with swelling in neck, bilateral exophthalmos and antithyroid antibodies present likely due to:

A- Graves disease
B- Hashimotos
C- Goiter
D- Thyrotoxicosis

Ans: A

Q34. A 38-year-old woman presents to her primary care physician with complaints of increased fatigue. On further review, she also reports that she has been experiencing a 15-pound weight gain, cold intolerance, and constipation over the past few months. On physical exam, she is bradycardic, has a puffy face with periorbital edema, has thinning hair, exhibits delayed relaxation of deep tendon reflexes, and is without a goiter. Investigation for Hashimotos thyroiditis:

A- Anti thyroglobulin & anti microsomal
B- Anti T3
C- TFTs
D- Anti Thyroglobin
E- Anti RNA

Ans: A

Q35. Factor 8 is not available which of the following can be given as alternative therapy?

A- FFP
B- Cryoprecipitate
C- Whole blood
D- Plasma
E- N/S

Ans: B

Explanation:

Cryoprecipitate has – Factor 8+13
FFP has – Factor 9

Q36. Brucellosis is caused by:

A. Red meat
B. Unpasteurized milk
C. Toxic plants
D. Undercooked pork

Ans. B

Q37. Trisomy 18, not associated with:

You should know the associations of Trisomy 18 (Edward's) that way you will be able to pick the odd one out.

E – Elongated skull
D – Digits overlapping (clenched fist)
W – VSD in 90% of cases
A – Apnea (cause of death)
R – Rocker bottom feet
D – Dysplastic ears, intellectual disability

Q38. Patient was on OT table and transfused with blood, within 10 minutes he developed a reaction. Cause is:

A- Cytotoxic T cell rejection
B- Graft vs host disease
C- Non immune vascular disease
D- Antibody mediated rejection
E- Type 4 Hypersensitivity

Ans: D (FA)

Explanation:

Hyper acute Rejection – Pre formed antibodies (Type 2 Hypersensitivity)
Acute Rejection – CD8 Cells (Type 4 Hypersensitivity)
Chronic Rejection – CD4 Cells (Type 2+4 Hypersensitivity)
Graft vs Host Disease – Type 4 Hypersensitivity

Q39. Most common inborn error of metabolism?

A. Phenylketonuria
B. Galactosemia
C. Gaucher
D. Neiman

Ans. A

Q40. A Female present with fever and dysuria. Gram negative motile rod shaped organism found that form lactose fermenting pink colony on Macconkey agar they are indole positive and oxidase positive. What is most common cause of UTI?

A- Pseudomonas
B- Compylobacter
C- Proteus merabilis
D- Klebsiella
E- E. coli

Ans: E (FA)

Explanation:

Fast – E. coli, Klebsiella and Enterobacter
Slow – Citrobacter and Serratia
Non Lactose fermenter
Salmonella, Shigella, Pseudomonas and Yarsenia

Q41. A reaction in which antibodies against the bacterium streptococcus pneumoniae combine with the bacterial capsule, which becomes swollen and visible to light microscopy is called:

A. Schwartzman reaction
B. Antigenic reaction
C. Capsular shift
D. Quellung reaction

Ans. D

Q42. A patient presented to you with Achilles tendon xanthomas and was diagnosed with familial hypercholesterolemia where the defect lies in LDL receptor signaling. You know that statins increase LDL receptor signaling. Which type of hypercholesterolemia has defective LDL receptor:

A. Type 1
B. Type 2A
C. Type 2B
D. Type 3

Ans. B

Q43. Eosinophilia does not occur in:

A. Hookworm infection
B. Pinworm infection
C. Allergic asthma
D. SLE

Ans. D

Q44. 5 years old child has neck rigidity, fever restless, on CSF examination, low glucose high proteins, he was diagnosed as meningitis and causative agent is:

A- Hinfluenza
B- Strep pneumoniae
C- Group b streptococci
D- E.coli
E- Listeria

Ans: B (FA)

Q45. Child had fever Sore throat took antibiotic for 3 weeks later develop generalized edema haematuria likely diagnose is:

A- RPGN
B- Membranous nephritis
C- PSGN
D- FSGN
E- IgA nephropathy

Ans: C

Q46. Multiple washing technique is employed in which of the following?

A. Latex agglutination
B. Hemagglutination
C. ELISA

Ans. C

Q47. Regarding klebsiella what is true?

A. Motile
B. Gram positive
C. Causes 3 % of community acquired pneumonia

Ans. C

Remember: Klebsiella pneumoniae is a gram-negative, lactose-fermenting, non-motile, aerobic rod-shaped bacterium

Q48. Schwartzman reaction is:

A- Complement Mediated
B- Autoimmunity
C- Endotoxin Mediated
D- Antibody Mediated

Ans: C

Q49. Methemoglobin contains:

A. A denatured globin
B. Ferriprotoporphyrin
C. Globin of one species with heme of another

Ans. B

Q50. Erythropoietin acts by:

A. cAMP
B. cGMP
C. Tyrosine kinase
D. JAK/stat pathway

Ans. D

Q51. Regarding hemoglobin, true is:

A. Doesn't carry CO_2
B. Acts as s buffer
C. Contain 2 alpha 2 beta chain
D. Contain less iron than myoglobin
E. All are true

Ans. B

OR

Q. Assessment of muscle injury by:

A. Myoglobin
B. CKMB
C. CKBB
D. CKMM
E. Muscle biopsy

Ans. A

Q52. Most common organism causing infection in patients with HIV is?

A. Pneumocystis carini
B. Cryptococcus
C. HSV
D. Candida
E. Haemophilus

Ans. D

Also know: Most common opportunistic organism causing infection in patients with HIV is?

A. Pneumocystis carini
B. Cryptococcus
C. HSV
D. Candida
E. Haemophilus

Ans. A

Remember:

HIV – TB
AIDS – Pneumocystis jiroveci

Q53. Most common Hospital acquired UTI:

A. Staphylococcus
B. Proteus
C. Serratia
D. Streptococcus

Ans. B

Remember:

Hospital acquired UTI: Ecoli > Proteus > Klebsiella

Q54. ECG of patient shows progressive prolongation of PR interval in successive beats followed by dropped heart Beat patient is suffering from?

A- Mobitz 1 AV block
B- Mobitz 2 AV block
C- Atrial flutter
D- Complete AV block
E- 1st degree AV block

Ans: A

Q55. Which amino acid is not produced by the body and should be included in diet?

A. Alanine
B. Tyrosine
C. Phenylalanine
D. Tryptophan.

Ans. C>D (both are essential)

Remember:

Essential amino acids are ones that cannot be synthesized by body and have to be supplied through dietary intake.

You should know the names of essential and non essential amino acids as sometimes the question stem can be changed

An easy **mnemonic** for essential amino acids is **"PVT TIM HALL".**

P Phenylalanine
V Valine
T Tryptophan
T Threonine
I Isoleucine
M Methionine
H Histidine
A Arginine
L Lysine
L Leucine

Q56. Dead space decreased in:

A. Emphysema
B. Pleural effusion
C. Tracheostomy
D. Hypertension
E. Pneumothorax

Ans. C

Explanation:

Increased dead space:

Emphysema
Pneumonia
ARDS
Smoking
ETT intubation
Bronchitis
Asthma
Cardiac Failure
Pulmonary Embolism
Neck Extension
Standing
Hypotension
Bronchodilation

Decreased dead space:

Atelectasis
Tracheostomy
Sleep
Maxillectomy
Hyperventilation

Neck Flexion
Supine Position
Bronchoconstriction

Q57. An old man presented with malaise for the past 1 year. Labs show hb:10, TLC:6800, platelets 211000, MCV 85, ferritin normal., serum iron 30 and TIBC 320. The morphology of all cells is normal on bone marrow biopsy but sustainable iron deposits were also seen. What is the likely cause?

A. Hep. C
B. SLE
C. Fanconi anemia
D. Atrophic gastritis

Ans. A

Q58. Regarding red blood cells:

A. Larger than all WBCs
B. Mean MCV is 85fl
C. Contain remnants of mitochondria and endoplasmic reticulum

Ans. B

Q59. Which one is not increased in stress?

A. GH
B. Cortisol
C. ADH
D. Insulin

Ans. D

Q60. Other name for CLL:

A. SLL
B. Diffuse large B cell lymphoma

Ans. A (Chronic lymphocytic leukemia/small lymphocytic lymphoma is a type of non-Hodgkin lymphoma.)

Q61. In which of following gene for DNA repair becomes defective?

A. Burkit lymphoma
B. Retinoblastoma
C. Xeroderma pigmentosum

Ans. C

Q62. Most common type of hyperlipidemia:

A. Type 1
B. Type 2
C. Type 3
D. Type 4
E. Type 5

Ans. B (Type IIB is most common)

Q63. Scenario of multiple myeloma: What will be the bone marrow finding

A. Numerous plasma cells
B. Hyper cellular marrow with blasts

Ans. A

Q64. Absent in gallbladder:

A. Muscularis mucosa
B. Peri muscular layer

Ans. A

Q65. Respiratory alkalosis:

A. Low pco2 low po2
B. Low pco2 high ph

Ans. B

Q66. 5 years old male bone marrow aspiration shows more than 20% blasts acid phosphatase positive sudan black negative:

A. AML
B. ALL
C. T lymphocyte leukemia
D. Histiocytosis

Ans. B

Explanation:

AML Sudan black +ve
ALL Sudan black -ve

Q67. Most specific for acute hepatitis:

A. ALT
B. AST
C. GGT

Ans. A

Q68. H.pylori suspected on endoscopy of patient suffering from gastritis, specific diagnosis is through:

A. Urea breath test
B. Histopathology

Ans. B (on endoscopy, biopsy of tissue stomach is most accurate)

Q69. Fungal infection causing extensive endothelial damage via sinus infection

A. Cryptococcus
B. Histoplasmosis
C. Mucor

Ans. C

Q70. Vibrio cholera:

A. Anaerobe
B. Grows on alkaline media

Ans. B

Q71. Highest content of protein is in:

A. IDL.
B. LDL
C. HDL
D. Chylomicron

Ans. C

Q72. Most common cause of pyogenic peritonitis:
A. Bacteroides
B. E.coli
C. Spirochets
D. Proteus
Ans. A

Remember:
Peritonitis – E-coli
Pyogenic Peritonitis – Bacterioides
Peurperal Sepsis – Group B streptococcus > E coli > Bacterioides

Q73. Factory worker presented with motor peripheral neuropathy, it can be due to which element:
A. Lead
B. Manganese
C. Magnesium
Ans. A

Q74. Bacteria adhere to cell through:
A. Teichoic acid
B. Pilli
C. Capsule
Ans. B

Q75. A patient presents Short limb, normal trunk and lumbar lordosis the mode of inheritance of this disease is:
A- X Link Recessive
B- X Link Dominant
C- Autosomal Recessive
D- Multifactorial
E- Autosomal Dominant
Ans: E (Achondroplasia)

Q76. A vessel containing thick circular layer of muscles:
A. Medium size artery
B. Medium size vein
C. Large vein
Ans. A

Q77. Burkit lymphoma oncogenesis by EBV:
A. Protoncogen c-myc amplification
B. Protoncogen c-myc transcription
C. Ras protooncogene
D. Bcl2 protooncogene
Ans. A

Q78. Staphylococcal toxin is:
A. Exotoxin
B. endotoxin
C. Enterotoxin
Ans. A

Q79. Most common tumor after transplant:
A. HCC
B. Myeloproliferative
C. RCC
D. Lymphoproliferative
Ans. D

Q80. Not a tumour marker:
A. CEA
B. AFP
C. HCG
D. Acid phosphatase/Amylase
Ans. D

Q81. Post gastrectomy Anemia which vitamin will be deficient?
A- Folic acid
B- B12
C- B6
D- B1
Ans: B

Explanation:
After Gastrectomy most common anemia – Iron deficiency anemia.
After Gastrectomy within 6 month – Iron deficiency
After gastrectomy more than 6 month – megaloblastic anemia
Gastrectomy can produce Pernious anemia like symptoms but not acutal pernious anemia as it is autoimmune.

Q82. Klinefilter karyotype is:
A- 45XX
B- 47XXY
C- 46XX
D- 46XY
Ans: B

Q83. Patient came with of skin rash and urticaria type of hypersensitivity will be:
A- Type 3
B- Type 2
C- Type 1
D- Type 4
E- Type 1+2
Ans: C

Q84. Patient presented in OPD with an ulcer on distal shaft of penis most definite lab test (primary syphilis scenario). Which investigation will you do next?

A. TPA
B. Dark field microscopy
C. FAS AB
D. VDRL

Ans. B (Biopsy with dark field illumination is the diagnostic test of choice for primary syphilis i.e. with chancre KAPLAN)

Q85. Antitumor cells express:
A. MHC 2
B. CD8 +cytotoxic t cell

Ans. B

Q86. Most sensitive to radiotherapy:
A- Lymphoma
B- Seminoma
C- Germ cell tumor
D- Embryonal Carcinoma

Ans: A

Explanation:
- ✓ Regarding sensitivity to radiotherapy:
- ✓ Lymph node tumor > Seminoma > Glioma > Craniopharyngioma
- ✓ Old Age + Painless testicular tumor +
- ✓ Raised LDH – Lymphoma
- ✓ Old Age + Painless testicular tumor +
- ✓ Mature Stem cells – Teratoma
- ✓ Young + Painless testicular tumor +
- ✓ Raised LDH+ Radiosensitive – Seminoma
- ✓ Least Radio Sensitive Blood Cell – Platlets
- ✓ Most Radio Sensitive Organ – Skin
- ✓ Least Radio Sensitive Organ – Vagina
- ✓ Most Radio Sensitive Mucosa – Intestinal
- ✓ Radiation induced Brain malignancy – Meningioma
- ✓ Overall radiation induced CA – Leukemia

Q87. Reservoir of plague is rats, and the vector is:
A. Ticks
B. Mites
C. Fleas
D. Flies

Ans. C

Q88. Food poisoning by staph aureus mediated by
A- Exotoxin
B- Endotoxin
C- Enterotoxin
D- Erythrogenic toxin
E- Phagotoxin

Ans: C

Q89. Young male with hx of fever and unconsciousness. His csf show WBC 400 lymphocytes 75% neutrophils 25% turbid appearance protein 2.1gm glucose 50mg. Diagnosis?
A) TB meningitis
B) Viral meningitis
C) Fungal meningitis

Ans. A

Q90. Cystoscope and endoscope sterilization is done with which of the following?
A- Flush the channel with 70-90% ethyl alcohol or isopropyl alcohol
B- Tyndilization
C- Autoclaving
D- Pastuerization

Ans: B

Q91. 78 years old lady purple patches over body but all labs were normal, only bleeding time was increased > 7 minutes. Which of the following could be the cause?
A. Senile purpura.
B. Scurvy
C. Hemophilia
D. Vwb

Ans. A

Q92. Least compensated acid base disorder:
A. Normal anion gap
B. Increased anion gap

Ans. A

Q93. Primigravida with complain of headache and blueish spots on skin. shistocytes on peripheral film:
A. Pre eclampsia
B. HELLP
C. HUS
D. TTP
E. DIC

Ans. B

Q94. Most imp criteria for malignancy on histopathology:
A. High n/c ratio
B. Pleomorphism
C. Mitosis
D. Invasion

Ans. D

Q95. Vaccine is not available against:
A. EBV

B. Japanese encephalitis
C. Measles.
Ans. A

Q96. Most common etiological agent for tumor in AIDS:
A. EBV
B. CMV
C. HPV
D. HHV8
Ans. D > A

Q97. Rhinosinusitis fungus invading endothelium:
A. Aspergilloses
B. Mucor
C. Histoplasma
Ans. B

Q98. A boy took chloramphenicol suffered from anemia, recurrent infections and epistaxis. This is:
A. Aplastic anemia
B. ITP
Ans. A

Q99. A 28 year old soldier after retiring from siachen glacier, having spent 6 months there, presents to CMH Rawalpindi, with complains of headache and peripheral cyanosis of his fingers. Most probably the cause is?
A- Secondary polycythemia
B- Polycythemia vera
C- Sickle cell anemia
D- Physiologic polycythemia
E- Anemia
Ans: A

Q100. Spores killed by:
A. Dry heat at 160 temp fr 1hr.
B. Moist heat at 100 temp fr 20min
C. Gentoin violet
Ans. A

Q101. Highest content of cholesterol is in:
A. Chylomicron
B. HDL.
C. IDL
D. LDL
Ans. D

Q102. Hyperpigmentation due to endocrine disturbance is not a feature of:
A. ACTH therapy
B. Pregnancy
C. Melasma
D. Pellagra
E. Addisons disease
Ans. D

Q103. Pigmentation in upper dermis is due to:
A. Panniculitis
B. Alteration of bonds
C. Inc activity of melanocytes
Ans. C

Q104. Deficiency of glucose 6 Phosphatase causes?
A. Increase in glycogen storage in liver
B. Decrease in glycogen in skeletal Muscle
C. Hypoglycemia
Ans. C

Q105. Patient has history of HTN, his BP was 210/ 160 and was taking anti-hypertensives. What structure in the kidney is affected most?
A. Pct
B. Macula densa
C. Dct
D. Juxtaglomrular cells
Ans. D>B

Q106. Carcinogenic free radical injury after radiation takes:
A. 2 to 5 years
B. 5 to 10 years
C. Within 2 years
Ans. B

Q107. Lymph nodules absent in:
A. Lymph nodes
B. Payer patches
C. Tonsils
D. Thymus
Ans. D

Q108. Burkit lymphoma oncogenesis by EBV:
A. Protoncogen c-myc amplification
B. Protoncogen c-myc translocation
C. RAS protooncogene
D. BCL2 protooncogene
Ans. B

Q109. Hypercalcemia in malignancy due to:
A. PTH
B. PTH related peptide
C. Local invasion of bone malignancy
D. Calcitonin
Ans. B

Q110. Most common cause of Addison's disease in children is?
A. TB
B. Autoimmune
C. Adrenogenital syndrome
D. Hemorrhage
E. Water house friedrich syndrome
Ans. B

Q111. CML can be best differentiated from leukemoid reaction by:
A. Leukocyte alkaline phosphatase
B. Sudan
C. PAS
D. Esterase
Ans. A

Q112. A boy with more than 100 tubular polyps on colonoscopy and family history of colonic polyps, cause:
A. FAP
B. Peutz jehgars
Ans. A

Q113. Rapidly induced hypokalemia:
A. Diabetic coma treated with insulin
B. Ileostomy
C. Duodenal atresia
Ans. A

Q114. Rapidly adapting receptors:
A. Free nerve endings
B. Pacinian corpuscles
C. Pain receptors
Ans. B

Q115. RTA multiple fractures 90/50bp and patient is in semicomatose state. What will you do first?
A. Volume replacement.
B. Reduction and stabilize the fracture
C. Tracheostomy
Ans. A

Q116. A young man presented with absent stretch reflex, atrophy of calf muscles, loss of pain and temperature on the lateral aspect of leg and foot. The most likely lesion is:
A- Upper motor neuron lesion
B- Lower motor neuron lesion with anterior horn damage
C- Lower motor neuron lesion
D- Lower + upper motor nueron lesion
Ans: B

Q117. Which of the following is not an STD?
A. Granuloma inguinale
B. Condylomata
C. Leprosy
Ans. C

Q118. A man is suffering from fever, malaise and cough. On microscopy macrophages and epitheloid cells seen along with caseous necrosis. Diagnosis?
Ans. Mycobacterium tuberculosis

Q119. Mycobacterium tuberculosis:
A. Doesn't produce spore.
B. No capsule.
C. Readily decolorized with acid
Ans. A

Q120. Not transmitted by fecal oral route:
A. Trichrius
B. Trichnella
C. E.coli
D. S.aureus
Ans. D

Q121. Scenario massive splenomegaly without lymphadenopathy TRAP positive:
A. AML
B. CLL
C. Hairy cell leukemia
Ans. C

Q122. Fibrocartilage is present in:
A- Primary cartilaginous joints
B- Larynx
C- Intervertebral disc
D- Epiglottis
E- Amorphous ground substance
Ans: C

Explanation:
- Fibroblast Secrete – Amorphous Ground Substance
- Fibrocartilage has – Rich Collagen
- Fibrocartilage present in – Intervertebral disc

Q123. Epidural space widest at?
A. L2
B. Below foramen magnum
C. T7
D. T12
Ans. A

Q124. A patient has chest pain from 4 hrs which is radiating to his left arm. ECG

shows st elevation. Which cardiac enzyme will be raised?

A. Ck-mb
B. Trop-I
C. Myoglobin

Ans. B

Q125. Feature of dysplasia:

A- Loss of polarity and architecture
B- Pleomorphism
C- Metastasis
D- Invasion

Ans: A

Q126. In which of the following man is the definitive host:

A. Hookworm
B. Hydatid cyst
C. Round worm (ascaris)

Ans. C

Also know:

Humans are the definitive host for pinworms, whipworms, and certain kinds of tapeworms and T. solium

Q127. Human is an intermediate host in:

A- Hydatid Disease
B- Typhoid
C- Tapeworm
D- Ankylostoma

Ans: A

Q128. Undifferentiated germ cells lining seminiferous tubules:

A. Primary sprmatogonium (spermatogonia A)
B. Secondary spermatogonium
C. Spermatids
D. Sertoli cells

Ans. A

Q129. 35 year old man with 20% blast on bma acid phosphatase positive sudan black negative:

A. ALL
B. T lymphocytic leukemia

Ans. A

Remember: AML is sudan +ve and ALL is sudan -ve

Q130. Most common tumor inAIDS:

Ans. Kaposi sarcoma

Q131. Antibodies in serum TSH 0.05, T4 increased. T3 normal Diagnosis?

A. Graves disease.
B. Hashimotos thyroidits

Ans. A

Q132. Intra nuclear bodies found in pt with pneumonia. Likely causative agent:

Ans. CMV

Q133. A woman comes to you with recurrent abortion, which test will you order?

A. LH
B. FSH
C. Estrogen
D. Progesterone

Ans. D

Q134. Non bacterial endocarditis is seen in:

A. Neoplasms
B. SLE
C. Rheumatoid arthritis
D. IHD

Ans. A

Remember:

Flat small to medium vegetation – Libman Sac endocarditis
Friable small vegetation – NBTE
Friable large irregular vegetation – IE

Q135. A 60-year-old man presents to an urgent care clinic for a rash on his right arm. He reports that this rash suddenly occurred about 1 day ago. He has been in 10/10 pain from this rash. He reports that he had chickenpox during his childhood and that his physician had recommended that he receive a shingles vaccine; however, he had not had a chance to do so. He has not been sleeping well, as he is currently going through a divorce. On physical exam, there is a vesicular rash in a dermatomal distribution on his right upper arm. Likely diagnosis?

Ans. Varicella Zoster virus HHV3

Q136. Sterilization of endoscopic instruments by:

A- Chlorhexidine
B- Autoclaving
C- Glyceraldehyde 2%
D- Pasteurization

Ans: C

Q137. Heating in steam at 100C for 20 minutes on 3 consecutive days is:

A. Autoclaving
B. Pasteurization
C. Tyndilization

D. Steaming

Ans. Tyndilization > Insissipation

Q138. A young man with aplastic anemia was given antilymphocyte globulin (ALG). He had no immediate complication. 1 weak later he developed fever urticarial rash, arthralgia, and generalized lymphadenopathy. The pathophysiology of these diseases is:

A. Arthus reaction
B. Type I hypersensitivity
C. Type II hypersensitivity
D. Type III hypersensitivity
E. Type IV hypersensitivity

Ans. D

Q139. A 2 year old boy came with complain of lethargy, poor slow movements, how will you diagnose:

A. TSH with metabolic enzymes
B. Thyroid profile

Ans. B

Q140. IV potassium will cause:

A. Metabolic acidosis
B. Aldosterone release

Ans. B

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Pathology – 2016

Q. AV node supplied by:
A. RCA at origin of aorta
B. RCA near interventricular groove
Ans. B
Remember:
- ✓ SA node: RCA
- ✓ AV node: RCA. (Through PDA)
- ✓ Bundle of His: RCA
- ✓ Purkinji fibers: RCA
- ✓ RBB: LCA
- ✓ LBB: LCA + RCA
- ✓ Most of conducting system of heart supplied By RCA with exception of RBB
- ✓ infundibulum/right ventricular outflow tract : Right conus artey (RCA)
- ✓ anterior two third of interventricular septum: LAD
- ✓ posterior one third of interventricular septum : PDA
- ✓ Free wall of right ventricle:
- ✓ Right marginal artery >RCA
- ✓ Apex of heart: LAD
- ✓ posterolateral surface of left ventricle : Left circumflex artery
- ✓ Inferior wall of heart: Right marginal artery
- ✓ Posterior surface of heart :
- ✓ 85% pda
- ✓ 8%. Lcx
- ✓ Accompanying vein with lad: great cardiac vein
- ✓ Accompanying vein with pda: middle cardiac vein
- ✓ Epicardium blood supply : coronary artery
- ✓ Pericardium blood supply: pericardiophrenic
- ✓ Artery

Q. Purkunji Fibers are:
Ans. Specialized cardiac cells
Q. Post 1/3 of interventricular septum supplied by:
A. LAD
B. LCX
C. RCA
Ans. C
Q. Negative charge of basement membrane is due to:
A. Elastin
B. Laminin
C. Cadherin
D. Heparan sulphate
E. Selectin
Ans. D
Q. A patient with pyloric stenosis and history of recurrent duodenal ulcers has chronic vomiting, the most likely biochemical abnormality in this case would be:
A. High seum bicarb
B. Hypokalemia
C. Hyponatremia
D. Hypovolemia
Ans. B (hypokalemic hypochloremic metabolic alkalosis)
Q. Urine osmolarity 1200 and plasma osmolarity 300. Diagnosis:
A. SIADH
B. Dehydration
Ans. B
SIADH Plasma Osmolarity → Below 280 mosm/L
Normal Water Deprivation →Above 280 mosm/L
Q. Erythropoietin is secreted from which cell?
A- Peritubular capillary cell
B- Interstitial cell of kidney
C- Mesangial cell
D- JG cell
E- Para mesangial
Ans: A (FA)
Explanation:
Peritubular capillary cell secrete –Erythropoietin
JG cell secrete – Renin
Q. The characteristic nodular glomerulosclerosis of diabetic glomerulopathy is called:
A. Robertson's lesion
B. Mcbuergon's nodules
C. Kimmelsteil Wilson Lesion
Ans. C
Q. Urinary stones associated with infection of:
A. Streptococcus
B. Staphylococcus
C. Proteus
Ans. C (E. Coli > Klebsiella > Proteus)
Q. A normal looking girl came to you with primary amenorrhea o/e having short blind vagina, with normal vulva, scanty

pubic hair growth and normal breast and absent uterus her type of karyotype is:

A- 46XX
B- 47XY
C- 46XY
D- 45O

Ans: C

Q. Stratified cuboidal epithelium is present in?

A- Nasal cavity
B- Fallopian tube
C- Male urethra
D- Lining of duct of Sweat gland

Ans: D

Explanation:

Sweat gland – Stratified Cuboidal
Salivary gland – Stratified Columnar

Q. Cimetidine S/E:

A. Enzyme Inhibitor
B. Estrogenism
C. Agranulocytosis

Ans. A and B are both correct. In this case A>B

Q. ARPKD Associated With:

A. Diabetes
B. Thyroid disorder
C. Gynecomastia
D. Hepatic Fibrosis

Ans. D

Q. Whip like activity of cilia is seen in:

A. Cervix
B. Ovary
C. Fallopian Tube
D. Adrenal gland

Ans. C

Q. What is the best way to detect exact gestational age of fetus?

A. CRL at 8 week
B. Femur length at 28th week
C. Biparietal diameter at 18th week

Ans. A

Q. Intraembrayonic Coelom is derived from:

A. Extraembrayonic Mesoderm
B. Lateral Plate Mesoderm
C. Intermediate Mesoderm

Ans. B

Q. Primordial germ cell migrates to urogenital ridges:

Ans. 6 Week

Remember:

Primordial germ cell form = 3rd week
Primordial germ cells migrate to ridges = 6 weeks

Q. Glandular proliferation of endometrium:

A. Progesterone
B. Estrogen

Ans. A

Q. Cardiac defects in fetus of mother suffering from rubella infection will occur if:

A. 3rd month
B. 4th month
C. 5th to 10th week
D. 7th month.

Ans. C

Remember:

5-6 week=cataract
7-8 week=deafness
5-10week=heart malformations

Q. If a female has menstrual cycle of 35 days then ovulation occurs at:

A) 7
B) 14
C) 21
D) 28
E) 35

Ans. C (35 – 14)

Q. One of the following will characterize the onset of menopause:

A. Low estrogen with high FSH and LH
B. Low estrogen with high FSH and low LH.

Ans. A

Q. Turner Associated:

A. DM
B. Hepatic fibrosis
C. Cystic Hygroma
D. Prostatic hypertrophy

Ans. C

Q. Cystic Hygroma is disease of:

A- Lymph nodes
B- Lymphatic vessels

Ans. B

Q. Related to lymphatics:

A. Cystic hygroma
B. Angiosarcoma
C. Rhabdomyosarcoma

Ans. A

Q. Snowstorm appearance, large for dates uterus, no fetus seen:
A: Complete mole (69XXY)
B: Partial mole
Ans: A
Explanation:
In a complete mole, the uterus is usually larger than the expected gestational date of the pregnancy, whereas, in partial moles, the uterus can be smaller than the suggested date.

Q. Burkit lymphoma associated with:
A. HPV
B. HBV
C. EBV
D. CMV
Ans. C

Q. Which salivary gland tumor is benign?
A. Pleomorphic adenoma
B. Warthin tumor
C. Mucoepidermoid carcinoma
Ans. A

Q. A tumor with all 3 germ layers involved:
A) Teratoma
B) Adenocarcinoma
C) Hamartoma
D) Sarcoma
Ans. A

Q. On laparotomy mucin like fluid fill the peritoneal cavity, seeding of cavity is likely due to:
Ans. Adenocarcinoma

Q. A case of neoplasia with cells showing hyperchromasia, which test/marker to do to check origin of cells:
A. Vementin
B. Desmin
C. Cytokeratin
D. Cadherin
E. Integrin
Ans: C
Remember:
Cytokeratin – Carcinoma (Epithelial)
Vimentin – Sarcoma (Mesenchymal)
Desmin – Muscle

Q. First observable sign of irreversible cell injury in cardiac cell:
A. Clumping of nuclear chromatin
B. Hydropic change
C. Cell Swelling
D. Contraction bands in cytoplasm
Ans. D
Remember:
Early sign of reversible cell injury
ER swelling
Cellular swelling ✔
Most prominent sign of reversible cell injury
Myelin figure
Cellular swelling ✔
Most likely feature in reversible cell injury
Cellular swelling ✔
Myelin figure

Q. Male patient, DRE performed, enlarged painful prostate was present but there was no growth on routine culture of microbe:
A. BPH
B. Ca prostate
C. Candida
Ans. A

Q. Epithelium across which gas exchange takes place:
A. Simple columnar
B. Simple cuboidal
C. Simple squamous
Ans. D

Q. Almost 70% work of breathing is to:
A. Overcome elastic recoil of lungs
B. Counteract chest wall compliance
Ans. A

Q. During inspiration more air goes to alveoli in base than to apex because?
A. Alveoli at base ware more compliant
B. There is more blood flow to base of lung
Ans. B

Q. Why more oxygen goes to alveoli at apex than at base?
A) Inc. compliance
B) Inc. blood flow
C) Inc. v\q
D) Inc. pulmonary pressure
Ans. C

Q. Myoglobin function same as hemoglobin:
A. It Has 4 Heme Molecules
B. Show Bohr Effect
Ans: ?
These were the two recalled options but both are not correct.

I am writing down similarities and differences between hemoglobin and myoglobin, clear your concepts so you can pick the correct option:

HEMOGLOBIN	MYOGLOBIN
Similarities	
Globular protein Water soluble Ligand is oxygen	
Differences	
Exists in blood	Exists in muscle
Transport protein	Storage protein
Oligomer	Monomer
Quarternary structyre	Tertiary structure
Comparatively lower affinity	Comparatively higher affinity
Can bind to 4 O_2 molecules	Can bind to one heme group
4 subunits	1 subunit

Q. Which of the following causes thrombus formation?

A- Decrease Blood flow
B- Decrease Viscosity
C- Endothelial injury Vasoconstriction
D- Increase blood flow

Ans: C (Robins)

Explanation:

The Virchow's triad of thrombosis consist of stasis of blood flow, hypercoagulability & Endothelial Injury.

Q. Patient was diagnosed as case of pulmonary embolism. What are the most common source pulmonary emboli?

A- Deep leg veins
B- Lumen of Left atrium
C- Lumen of right ventricle
D- Femoral vein
E- Superficial leg veins

Ans: D

Q. Bacteria with fluorescent particles, and are resistant to disinfectants and frequently resistant to antibiotics is:

A- Pseudomonas aeruginosa
B- Staph Aureus
C- Streptococcus
D- E.coli
E- Bacteroides

Ans: A

Q. Most common occupational disease in the world:

A. Silicosis
B. Asbestosis

Ans. A (ref; gojlan)

Q. Type 2 pneumocytes deficiency (lack of surfactant) in infant's causes:

A- Meconium aspirations
B- Respiratory distress syndrome
C- Neural tube defects
D- Congenital diaphragmatic hernia

Ans: B

Q. Inc. serum calcium is a paraneoplastic syndrome associated with:

A. Small cell CA
B. Sqamous Cell CA
C. Adenocarcinoma of lung

Ans. B

Small Cell CA associated with

1-ACTH (Cushing Syndrome)
2-SIADH
3-Lambert Eaton
4-Poor Prognosis

Squamous Cell CA Associated with

1-Smoking
2-Hypercalcemia (pthrp)
3- Keratin Pearls and Intracellular Bridges

Q. An 11-month-old infant had upper and lower respiratory tract infections almost continuously since the time of birth, with organisms including Pneumocystis jiroveci and Pseudomonas aeruginosa identified. The baby also has oropharyngeal candidiasis. The baby succumbs to a cytomegalovirus pneumonitis At autopsy thymus is markedly hypoplastic resulting in decreased T cells. Lymph nodes throughout the body are small, with absent germinal centers on microscopic examination. Which of the following mechanisms is most likely to explain these findings?

A- Adenosine deaminase deficiency
B- Thymic hypoplasia
C- Human immunodeficiency virus infection

D- Autoantibodies to both T and B lymphocytes
E- Failure of development of 3rd and 4th pharyngeal pouches

Ans: A

Q. 80yrs old male bed ridden since 1 years presented with complain of fever and cough with sputum yellowish in colour, his lung was filled with pus most commonly involve organism is:

A- Staph Aureus
B- Streptococcus pneumonia
C- Hemophilus influenza
D- Morexella catarahhalis
E- Klebsiella

Ans: A

Explanation:

Klebsiella – Alcohlic + Current jelly sputum
Strep Pneumonae – Brown Rusty Sputum
Staph Aureus – Thick Yellow Sputum

Q. B cells seen in:

A. Thymus
B. Adrenal gland cortex
C. Lymph Node Follicles

Ans. C

Q. Post splenectomy infection organisms:

A. Pneumococcus
B. Meningococcus
C. H.influenza
D. Encapsulated bacteria

Ans. A (All but prefer Pneumococcus > H. Influenza > Neisseria meningitides)

Q. T cell receptor (TCR) interacts with:

a. Antigen presenting cells
b. MHC

Ans. B

Q. A 32-year-old man presents with redness of the eye as well as discharge. He reports that he experiences pain with urination and stiffness and pain of the knee and ankle. He says that he had a sexually transmitted disease approximately 5 weeks ago but is otherwise healthy. On physical exam there is conjunctivitis, asymmetric oligoarthritis, and discharge from the urethral meatus. Diagnosis is?

A. Reiter syndrome
B. CAH
C. Papillary tumour of thyroid
D. Lung cancer

Ans. A

Q. A 4 year boy presented with clinical features of failure to thrive, recurrent sinusitis, otitis media and rti. He also gives h/o chronic diarrhea; there is family h/o such complaints, the most relevant investigation in this case to confirm the diagnosis is via?

A. Chloride sweat test
B. Fat absorption test
C. Jejunal biopsy
D. Vit. B-12 assay

Ans. A

Q. A 5 year old boy comes with recurrent cervical lymphadenopathy. Klebsiella pneumonae is isolated on each occasion. He is most likely suffering from immunodeficiency state of:

A. Chronic granulomatous disease
B. Common variable agamaglobilinemia
C. Severe combine agamaglobilinemia
D. Bruton's agamaglobinilinemia

Ans. A

Q. A middle age female with recurrent chest infections, long history of diarrhoea. On stool examination cysts of Giardia lamblia were detected. Periferal smear reveals normal T cell but B cells are slightly decreased. Serum iga 73, igg 300 and igm is 67. What is the most likely Dx?

A- Bruton's agammaglobulinemia
B- Common variable immunodeficiency
C- HIV infection
D- Cystic fibrosis

Ans. B

Q. Inactivated toxin used as toxoid vaccine in:

A. Measles
B. Tetanus
C. Mumps
D. Rubella

Ans. B

Q. Immunoglobulins give which type of immunity?

A. Passive
B. Active
C. Artificial active
D. Passive artificial

Ans. D

Q. Main reason of screening and testing before blood transfusion is to primarily prevent:

A. Allo Immunisation
B. Blood Transfusion Related Infection

Ans. B

Q. Iron deposition associated with organ dysfunction:

A. Hemosiderosis
B. Hemochromatosis

Ans. B

Q. One of the following which probably may not be a cause of hemolytic disease of newborn is blood group?

A. Kall
B. Kidd
C. Duffy
D. Rh
E. MNS

Ans. MNS > Duffy

Q. A 5 years old male child presented with epistaxis, gum bleeding and bleeding time more than 20 minutes and increased APTT most suitable diagnose is:

A- VWD
B- Hemophilia
C- Vitamin k deficiency
D- Vitamin c deficiency
E- Platelets defect

Ans: A

Explanation:

APTT raised only – Hemophilia (Intrinsic Pathway)
APTT and BT raised – VWBD
(Intrinsic Pathway)
All 3 raised -- DIC
Only BT raised – ITP (Low Platelets) or
Platelets Function Defect (Platelets
Count normal)

Q. Chronic intravascular hemolysis is characterized by:

A- Hemoglobenemia
B- Hemoglobinuria
C- Low haptoglobin
D- Hemosiderinuria
E- Unconjugated bilirubin

Ans: D

Explanation:

Acute intravascular hemolysis – Decrease hepatoglobin > reticulocytosis
Chronic intravascular hemolysis – Hemosidrinuria > Hemoglobinuria

Q. Pregnant women with HB 9.8, MCV 58 MCH 15 and ferritin 150 she probably has?

A- Iron deficiency anemia
B- Thalassemia trait
C- Anemia of chronic disease
D- Megaloblastic anemia
E- Hemolytic anemia

Ans: B

Explanation:

Thalassemia trait – MCV low + Ferritin normal
Iron deficiency – MCV low + Ferritin low

Q. Patient on IV anticoagulant monitoring done by which parameter?

A- BT
B- APTT
C- PT
D- CT
E- FDP

Ans: B

Explanation:

Heparin – APTT
Warfarin (Oral) – INR >PT

Q. A young boy having mass in neck biopsy of lymph node shows effaces architecture atypical mononucleosis cell with bilobed nucleus and eosinophilia and CD 15 and CD 30 positive diagnose is:

A- Non Hodgkin lymphoma
B- Hodgkin lymphoma
C- T cell leukemia
D- Infectious mononucleosis
E- Burkit lymphoma

Ans: B

Explanation:

Reed Sternberg cell is variety of Hodgking lymphoma having Bilobe cell and CD 15 and CD 30 positive.

Q. Which of the following is associated with multiple myeloma?

A- Systemic amyloidosis
B- Vascular Disease
C- Localized amyloidosis
D- Endocrine pathology

Ans: A

Q. Most specific symptom of temporal arteritis?
A. Visual loss
B. Jaw claudication
C. Temporal headache
D. Polymyalgia rheumatica
Ans. B

Q. All are true about temporal arteritis except:
A. Can lead to sudden blindness
B. More common in females
C. Worsens on exposure to heat.
D. Most affects elderly.
Ans. C

Q. A 65-year-old woman presents to the emergency department due to a severe headache and visual impairment in the right eye. Her symptoms are associated with pain with chewing and proximal muscle morning stiffness. On physical exam, she has decreased visual acuity of the right eye, scalp tenderness on the right, and an absent pulse in the right temporal area. Laboratory testing is significant for an elevated erythrocyte sedimentation rate. She is admitted and immediately started on systemic glucocorticoids. Diagnosis:
Ans. Giant cell (temporal arteritis)

Q. Kaposi sarcoma caused by:
A. EBV
B. CMV
C. HHV8
Ans. C

Q. During sleep which hormone level is more than awake time?
A) Cortisol
B) GH
C) Melatonin
D) Insulin
Ans: B

Explanation: During Sleep GH rises, during morning cortisol rises and melatonin in darkness.

Q. Patient has Mass in front of neck. On examination it is firm and tender. The patient also has hoarseness. The test to be done for diagnosis?
A- Ultrasound neck
B- Biopsy
C- T4 levels
D- FNAC
E- Radioisotope Scan
Ans: A

Q. Earliest change in retina in diabetic retinopathy?
A) Dilatation of Retinal arteries
B) Lipid deposition in Arterioles
C) Vitreous Haemorrhage
D) Retinal detachement
E) Vitreous bands
Ans. A

Q. Simple columnar epithelium with goblet cells and submucosal lymphoid tissue:
A. Ileum
B. Duodenum
C. Stomach
D. Colon
Ans. A

Also know:
Lymphoid organ with absorptive epithelium having submucosal folds = Appendix

Q. Earliest change after consumption of alcohol on histology:
A. SER hypertrophy
B. Steatosis
C. Micronodules
Ans. B

Q. Premalignant lesion which leads to SCC and needs excision is:
A- Actinic keratosis
B- Bowen's disease
C- Nevus
D- Leucoplakia
Ans: A

Q. Which among the following is an endogenous black pigment?
Ans. Melanin

Q. Which of the following is an oncovirus/malignancy associated virus:
A. HL
B. NHL
C. HTLV
Ans. C

Q. Free radicals formed by radiation they will damage:
A. DNA
B. Cell membrane

C. Mitochondria
Ans. A
Q. Ionizing radiation damage cell by:
A) Formation of Free radical
B) DNA damage
Ans. A
Q. Antibodies against calcium channel form in:
A- Myasthenia
B- Lambert Eaton syndrome
C- Cushing Disease
D- Addison disease
Ans: B
Q. G6PD Deficiency Mostly Presents With
A. Favism
B. Hemolysis After Drug Intake
Ans. B
Q. Difference between first and second heart sound?
A) Frequency
B) Duration
C) With carotid pulse
D) No difference
Ans. A
Second heart sound is sharper (due to high pitch and frequency) and Shorter as compared to the first heart sound.
Q. Gravid female chorionic villus sampling showed trisomy 21. The child will most probably suffer from
a) Down's Syndrome
b) Kleinfelter
c) Turner
Ans. A
Q. Scenario with damaged mitral valve now endocarditis causative agent:
Ans. Strep viridians
Q. A patient Whose ECG is normal, cardiac enzymes normal, x-ray lung field clear but on CT scan 0.5cm calcification found what is related condition and origin of this?
A- Atrial myxoma from left atrium
B- Atrial myxoma from right atrium
C- Pulmojary embolism
D- MI
Ans: A
Remember:
Location of atrial myxoma: Left atrium
Origin: Fossa ovalis
Q. A 55-year-old man complains of a rash he has had for many months. It occasionally itches. While he has tried some topical over-the-counter steroids, he has not seen his dermatologist yet since the symptoms were mild. On physical exam, his legs are covered with multiple well-demarcated red papules and plaques with some telangiectasia. A skin biopsy is obtained. A week later, the biopsy comes back with Pautrier microabsecesses, atypical T cell lymphocytic infiltrate, and cells with cerebriform nuclei. Histopathology confirms CD 30+ cells and skin infiltration by neoplastic T lymphocytes. What is this disease?
A. Hodgkin's disease
B. Mycosis fungoides
C. Burkitt's lymphoma
D. ALL
E. Hairy cell leukemia
Ans. B
Q. Most important prerequisite for renal transplant:
A. HLA testing
B. ABO compatibility
C. T cell count
Ans. A
Q. A 12yr old girl undergoes bone marrow transplant as a part of therapy for ALL. She subsequently presents with pulmonary complains and neurologic findings. Lung biopsy reveals granulomatous vasculitis with associated atypical lymphocytes. Clonality study reveals monoclonal B cell population with associated T cells. What infectious agent related to this diagnosis?
A. CMV
B. EBV
C. HPV
D. HHV8
E. Chlamydia pneumonia
Ans. A
Q. ICAM VCAM involved in:
A. Tight Binding (Fa)

B. Diapedesis
C. Margination

Ans. A

Q. During inflammation leucocyte cover the endothelium completely the process called:
A. Pavementation
B. Margination

Ans. A

Q. Staging of tumour shows:
A- Extent to which cell spread.
B- Invasion
C- Increase N/C ratio
D- Differentiations

Ans: A

Explanation:
Grading – Nuclear differentiation / degree of differentiation / Mitosis
Staging – Extent of spread / Lymph nodes involvement

Q. Patient is Smoker on biopsy of alveoli there will be:
A) Dec. no of Goblets cell
B) Squamous metaplasia
C) Columnar epithelium
D) Increase number of goblet cells

Ans. B

Q. Auer rods are present while Sudan black is also positive in:
A) AML
B) CML
C) Both

Ans. A

Q. A 10 year old boy with shoulder injury lost abduction of his shoulder up to 30 degree which muscle is lost?
A. Supraspinatus
B. Deltoid

Ans. A

Explanation:
- ✓ Unable to comb hair : trapezius
- ✓ Unable to scratch back : latissimus dosri
- ✓ Unable to do overhead abduction : serratus anterior
- ✓ Unable to do initial abduction upto 15 to 30 degree : supraspinatus
- ✓ Initial abduction done but can't do further abduction : deltoid
- ✓ Winging scapulae : serratus anterior /long thoracic nerve
- ✓ Shrugging of shoulders to check function of : Trapezius

Q. A 39-year-old woman hypothyroid woman presents to her primary care physician's office due to pain and numbness in her hand. The patient reports that the pain is worse at night and when her hand is outstretched; to relieve the pain she shakes her hand or places it under warm running water. She says her symptoms mainly affect the first 3 digits of her hand. She denies any recent injury to or pain in the hand or neck. On physical exam, she has normal range of motion of the neck and arm. She has 2+ bilateral biceps, triceps, and brachioradialis reflexes. She has a positive Phalen and Tinel test. Diangosis:
A. Hypertension
B. Diabetes
C. Carpal tunnel syndrome

Ans. C

Q. Common muscle protein for smooth and skeletal muscle?
A. Actin
B. Calmodulin

Ans. A

Q. The metabolite of vitamin D most commonly measured in lab for assessment of vit D status:
A. 1,25 dihydroxy D
B. 1 alpha hydroxylase
C. 25 hydroxy vitamin D
D. Cholecalciferol
E. Ergosterol

Ans. C

Q. Location of osteosarcoma:
A. Diaphysis
B. Metaphysis
C. Epiphysis

Ans. B

Geomed mnemonic
☆ Giant cell --- Epiphysis
☆ Osteosarcoma --- Metaphysis
☆ Ewing sarcoma --- Diaphysis
☆ Osteoblastoma --- Vertebral bodies

Q. Anorexia is caused by lesion of which part of hypothalamus?
A- Ventromedial nucleus

B- Lateral hypothalamus
C- Posterior hypothalamus
D- Anterior hypothalamus
E- Inferior hypothalamus
Ans: B

Explanation:
Lateral nucleus is feeding center its damage result in stop feeding and makes you Lean.
Medial nucleus is satiety center and its damage result in over eating and make you Massive (obese).

Q. Most medial in cerebellar nuclei:
A. Globose
B. Dentate
C. Emboliform
D. Fastigial
Ans. D

Q. Anterior spinal artery branch of:
A. Basilar
B. Vertebral Artery
Ans. B

Q. Erection occurs due to which of following?
A- Pudendal nerve
B- Sympathetic
C- Parasympathetic
D- Obturator nerve
Ans: C

Explanation:
Over all ejaculation – Pudendal nerve >Sympathetic
Ejaculation two parts
Emission – Sympathetic
Ejection – Pudendal
Erection – Parasympathetic

Q. Alzheimer's disease associated with trisomy 21 and which of following?
A. Apoe2
B. Apoe4
Ans. B
Apoe4 on chromosome 19

Q. Which of the following enzyme start unwinding of DNA template at replication fork?
A) DNA Topoisomerases
B) RNA polymerases
C) Helicase
D) Single stranded binding protein
Ans. C

Q. Milfolded proteinn tagged by golgi to go to:
Ans. Proteosome NOT lysosome

Q. 2 year old boy small multiple bone fracture, blue sclera, diagnosis?
Ans. Osteogenesis imperfect (defective type 1 collagen)

Q. Hematopoietic stem cell arrive in bone marrow of developing bones due to:
A. Reticular Fibers
B. Developing Blood Vessels In BM
Ans. B

Q. Multiple washing techniques is employed in which of the following?
A. Latex agglutination
B. Hemagglutination
C. Immunofluorescence
D. ELISA
Ans. C>D

Q. Patient on ventilator in icu developed bilateral crepts. Test to be done:
A. Sputum plus blood culture
B. Tracheal aspirate plus blood culture
Ans. B

Q. Commonest cause of down syndrome:
A. Robertsonian Translocation
B. Mosiacim
C. Non Disjunction.
D. Frame shift Mutation.
E. Trisomy
Ans. C

Q. Regarding chromosomal abnormalities true is:
A. Translocation is transfer of genes b/w homologus chromosomes
B. Monosomy involving somatic chromosome is incompatble with life
C. Reciprocal translocations are usualy clinically silent
D. Cri du chat syndrome involves robertsonian translocation
E. B and C
Ans. E

Q. Tb drug that causes peripheral neuropathy?
A. Isoniazid
B. Ethambutol
C. Streptomycin
D. Rifampicin
E. Pyrazinamide
Ans. A (prevented by vitamin B6 pyridoxine)

Q. Best way to diagrammatically represent percentages is:
A- Bar chart
B- Pie chart
C- Histogram
D- Chi square
E- Scatter
Ans: B

Q. Vit. K mechanism of action:
A. Gamma Carboxylation
B. Deamination
Ans. A

Q. 2 by 2 table in biostats seen in:
A. T test
B. Chi square test
C. Anova
Ans. B

Q. A 1 week old newborn is brought to the ED after a home delivery. His parents state they do not believe in vaccinations nor did they seek any medical attention after delivery. They state they have noticed bright red blood per rectum from the infant and he is very lethargic. On examination the infant has unequal pupils and his diaper has gross red blood. PT and APTT are both raised. What is the most likely diagnosis?
A) Cerebrovascular accident
B) Meckel diverticulum
C) Vitamin K deficient bleeding
D) Crohn disease
Ans. C

Q. Phosphodiestrase inhibitor MOA:
A. Inhibit conversion of camp to 5 AMP
B. Inhibits conversion of ATP to AMP
C. Activates adenylate cyclase
Ans. A

Q. Which layers are present in 2nd week of development?
A. Epiblast hypoblast
B. Epiblast mesoderm
C. Mesoderm
Ans. A

Q. Child present with dysentery Stool contains pus and rbcs in smear causative agent is:
A- Campylobacter
B- Enterotoxigenic E coli
C- Enterohemorrhagic E coli
D- Enteropathogenic E coli
E- Salmonella
Ans: C (FA)

Explanation:

Enteroinvasic E. Coli
Invade intestinal mucosa (Necrosis and Inflammation)
Cause dysentery similar to Shigella

Entero-Toxigenic E. Coli
Produce heat labile and heat stable enterotoxin (no inflammation or invasion)
Cause Travelor's diarrhea

Entero-Hemorrhagic E. Coli
O157:H7 is most common form
Cause dysentery (Inflammation and necrosis)
Shiga like toxin cause HUS (Anemia + Thrombocytopenia + AKI)
Cause mechanical hemolysis (Schisocytes on peripheral Smear)
Do not ferment sorbitol (Other E. Coli Do)

Entero-Pathogenic E. Coli
Attach to Apical surface Flatten Villi impair absorption
Cause Diarrhea in Pediatrics

Q. Virus mediated transfer of host DNA from one cell to another is known as:
A. Transduction
B. Transformation
C. Transcription
D. Integration
Ans. A

Q. Which of the following is flagellated?
A. Salmonella
B. Shigella
Ans. A

Q. Which is a DNA respiratory virus?
a) Respiratory Syncytial virus
b) Adeno Virus
Ans. B

Q. A person went to Thailand and presented with diarrhea which is watery and large in amount, in stool sample donut shaped cysts were found. Cause is:
A- Cryptosporidium
B- Cystocercosis
C- Ameoba
D- Staph Aureus
E- Histoplasmosis

Ans: A

Explanation:

- Diarrhea in AIDS – Cryptospordium
- Meningitis in AIDS – Cryptococus

Q. Soldier came home after 1 yr. He has 10 day history of watery diarrhea with donut shaped cyst the cause is:

A- Cryptosporidium
B- Cysticercosis
C- Amoeba
D- Staph Aureus
E- Histoplasmosis

Ans: A

Q. Microcytic hypochromic anemia is the result of infection with:

A. Diphylobothrium latum
B. Chlornochis sinensis
C. Ancylostoma Duodenal

Ans. C

Q. Which is immediate precursor of aldosterone and cortisol?

A. Cholestrol
B. Pregenolone
A. 17 hydroxy steroid
C. Testosteron

Ans. B

Q. Immediate precursor of aldosterone:

A. Cholesterol
B. Pregenolone
C. 18 hydroxycoritcosterone
D. Testosterone

Ans. C

Q. Parafollicular cells are in:

A. Thyroid
B. Parathyroid

Ans. A

Q. Anterior Surface of Heart is formed by:

A. Right Atrium
B. Right Ventricle

Ans. B

Q. A question was given on TOF where 3 out of 4 features were given, and 4th feature had to be picked from options. Please memorize all four features of TOF so you can attempt this type of question easily:

Features of TOF

Pulmonary stenosis
Right Ventricular Hypertrophy
Overriding aorta
VSD

Q. Histology of macula densa:

A. Deep basal Lamina
B. Flat epithelium

Ans. A

Q. Histology of macula densa:

A) Smaller cells than other
B) Large cells with nuclei and scattered cytoplasm
C) Flat cells

Ans. C

Q. Amnesia can occur due to damage to:

A. Insula
B. Parietal lobe
C. Temporal lobe
D. Frontal lobe

Ans. C

Q. In lesions of brain, the cells involved in scarring are:

Ans. Astrocytes

Q. Feathery degeneration of hepatocytes on staining due to:

A. Fe accumulation
B. Lead accumulation
C. Cu accumulation
D. Bile salts/Cholestasis

Ans. D

Q. Mesaxons are:

A) Found in axon terminal
B) Found in sheath of myelinated axon
C) Found within axons
D) Present close to muscle
E) Synonymous with node of ranvier

Ans. B

Q. For diagnosis of diphtheria which test should be done?

A. Blood culture
B. Throat or skin swab for smear and culture
C. Sputum test

Ans. B

Q. Hepatosplenomegaly and age was 65 with no hx of blood transfusion with microcytic hypochromic anaemia:

A. Chronic blood loss
B. Hemolytic anemia
C. Sickle cell anemia
D. Thalassemia

Ans. ?

Q. Young child with fever and stridor, what will give immediate diagnosis?

A. Staining
B. Cold agglutinin on blood
C. Culture

Ans. A

Q. A pt. presented with a local abscess with multiple draining sinuses in cervicofacial region the main causative agent is.

A. Staphylococci n streptococci
B. Oral anaerobes
C. Actinomyces iraelli
D. Enterobacteriace

Ans. C

Q. Which of the following is the most adverse LATE effect of radiotherapy?

A- Endarteritis Obliterans
B- Lymphoproliferative disorder
C- Venous thrombosis
D- Infection
E- Inflammation

Ans: B

Explanation:

Acute effect of radiotherapy – Desquamation
Chronic effect of radiotherapy – Endarteritis obliterans
Late effect of radiotherapy – Lymph proliferative disorder

Q. Mainstay of prevention of nosocomial infection:

A- Wear gloves
B- Use extensive hand washing after examining every patient
C- Sterilize used instruments
D- Wear mask

Ans: B

Q. Patient died on MI, on autopsy neutrophil with necrotic area seen after?

A) 48 hours
B) 12 hours
C) 24 hours
D) 78 hours

Ans. C

Q. A 7-year-old girl is brought to the emergency department after experiencing a risk fracture. The patient fell down to the ground and has not hit her head. This has never happened before. The patient's parents reports their child states she has pain in bones and at times feels weak. On physical exam, there is tenderness to palpation of the wrist with a waddling gait. Laboratory testing is notable for a decreased serum calcium and phosphate level, and increased alkaline phosphatase and parathyroid hormone. Diagnosis?

Ans. Rickets due to vitamin D deficiency

Q. Plasmodium falciparum causes:

A. Black water fever
B. Thyroid disorders
C. Diabetes
D. Hypercortisolism

Ans. A

Q. Tumour from ovaries spread mostly to contra lateral ovaries via:

A. Bones
B. Peritoneum
C. Lungs

Ans. B

Q. Another name of nodes of ranvier:

A. Mylinated Part Of Axons
B. Axon Hillock
C. Terminal Part Of Axons
D. Myelin sheath gaps

Ans. D

Q. Child with short height below 3 percentile, he is referred to a pathologist for growth hormone assessment of growth hormone. What method he will use?

A. Gh After Exercise
B. Basal Gh Level
C. Gh After Glucose Intake
D. Insulin tolerance test

Ans. D (If D is not in option then fasting early morning growth hormone)

Q. Child sore throat greyish memebrane in throat you suspect c diptheria how will you best detect it:

A. Sputum Culture
B. Throat Culture
C. Sputum and Blood Culture

Ans. B (if option of "throat culture and blood culture" is present then choose that)

Q. You want to make a slide or culture of c diptheria.how will u stain or detect it on the slide:

A. Gram Stain

B. Giemsa stain

Ans. A

If option of "albert's stain" is given then choose that. As it is specific for the metachromatic granules of C. Diphtheria.

Q. Patient with palpitation weight loss tachcardia. What will you do for diagnosis?

A. GH
B. TSH

Ans. B

Q. Which Is a DNA virusonly diseases were mentioned?

A. Inf Mononuclosis
B. Mumps
C. Measles
D. Yellow Fever

Ans. A (EBV is a DNA virus. Remember adenovirus & HBV are DNA viruses too)

Q. Most common site of thrombi of pulmonary embolism?

A. Deep vein of calf muscle (vein of soleus)
B. Popliteal vein
C. Femoral vein

Ans. C

Q. Most common site of thromboembolism:

A. Popliteal
B. Femoral
C. Deep veins

Ans. A

Q. Right bronchial artery arises from thoracic aorta at:

A- Right 3rd posterior intercostal space
B- Right 2nd posterior intercostal space
C- Left 2nd posterior intercostal space
D- Left 3rd posterior intercostal space

Ans: A

Q. Which Is secondary cartilagenous joint?

A. TMJ
B. Pubic Symphysis
C. Acromioclavicular Joint

Ans. A

Explanation:

Primary cartilaginous joint

1st Sternocostal joint
Between epiphysis and Diaphysis of long bone

Secondary cartilagenous joint

Intervtebral discs
Symphysis pubis
Manubriosternal joint

Q. Hyaline cartilage found in:

A. TMJ
B. Vertebral Disc
C. Lining Of Joint Capsule

Ans. C

Q. Why is elastic cartilage more opaque than hyaline cartilage?

A. Dense Elastic Fibers
B. Covered By Perichondrium

Ans. A

Q. Factor 8 produced by:

A- Endothelial cells
B- Parietal cells
C- Chief cells
D- Mucous cells
E- Serous cells

Ans: A

Q. An anemic patient on investigation shows Hb 6 increased platelets hyperplastic bone marrow. The most likely underlying cause of anemia:

A. Acute blood loss
B. Hemolytic anemia
C. Iron def anemia
D. Leukemia
E. Therapy for deficiency anemia

Ans. C

Q. A group of cancer patients with stage t4n1m1.their 5 yr survival is 5%. all of them will have one thing in common:

Ans. Cachexia

Q. A female with depression not cured by antidepressants serum Na is low, k is high. what could be the diagnosis?

Ans. Addison Disease

Q. A patient with hyperchloremic metabolic acidosis diagnosis:

A. CRF
B. Addision Disease
C. RTA

Ans. C

Q. Hyperchloremic metabolic acidosis:

A. Loop diuretic
B. Hydrochlorothiazide
C. Acetazolamide
D. Mannitol

Ans. C

Q. Healthy looking male only feature is flat T wave on ECG:
A. Addison Disease
B. Hypoaldosterone
C. Familial Hypokalemia

Poor recall.
Prefer None > C

Q. Av Node is:
Ans. Specialized conducting tissue

Q. Patient diagnosed with TB most specific microscopic feature:
A. Langerhans Giant Cell
B. Epithelioid cells
C. Caseous necrosis

Ans. C

Q. During tracheostomy increase bleeding is due to injury to:
A: Anterior jugular vein
B: Inferior thyroid vein

Ans. A
Increased bleeding = Anterior jugular vein
Most common cause of bleeding = Inferior thyroid vein

Q. Spinal cord suspended by:
Ans. Denticulate Lig

Q. An 11 years old girl got a fracture on Humerus. Where does Secondary ossification center is located in this age?
A- Medial Epicondyle
B- Trochlea
C- Lateral Epicondyle
D- Capitulum
E- Distal End of femur

Ans: C
Explanation: Critol

Bone	Age
Capetulum	1 year
Radial Head	3 years
Internal Epicondyle	5 years
Trochlea	7 years
Olecrenon	9 years
Lateral Epicondyle	11 years

Q. You are traing as a patholosist you want to preserve a culture. How would you do it?
A. Serial Sub Cultures
B. Low Voltage Freezer
C. Liq Nitrogen

Ans. C (Freeze-drying (lyophilization)

Q. Which is the benign tumour?
A. Adenoma
B. Teratoma
C. Lymphoma
D. Hepatoma

Ans. A

Q. 4th layer of scalp:
A. Loose connective tissue
B. Dense connective tissue

Ans. A

The SCALP
Dangerous area of scalp
A) Loose areolar tissue

Q. Which is not blood supply of scalp?
A. Maxillary artey
B. Occipital artery
C. Supra orbital artery
D. Supra trochlear artery

Ans: A

Blood supply of scalp lies in
Btw skin n aponeurotic layer >> dense Cutaneous layer contains blood vessels n nerves

Blood vessels of SCALP are located primarily in
Dense s/c layer
Ddddense >> bloodddd vessels

Q. Neurovasculature present in which scalp layer:
A) Skin
B) Connective tissue
C) Aponeurosis
D) Loose areolar tissue
E) Pericranium

Ans: B

Q. Deepest layer of scalp is:
A) Connective tissue
B) Aponeurosis (Epicranial Aponeurosis)
C) Loose areolar tissue (Danger area of scalp)
D) None of these

Ans: D
Coz it's SCALP deepest P >> periosteum

Q. Adrenalectomy causes preference of taste of:
A. NaCl
B. KCL

Ans. A

Q. You are a male doctor.a lady with revealing clothes walks in and talks to you seductively. What will you do?
A. Ask Her About Personal Life
B. Refer To Other Doc
C. Call In A Nurse
Ans. C

Q. A mother deliver a RH positive baby. In next delivery what type of hypersensitive reaction will occur if no treatment was given after first del:
A. Type 1
B. Type2
Ans. B

Q. Anion gap is:
Ans. Difference b/w measured anion and measured cation

Q. A mother is having blood group A+ (Ao, DD), father is having blood group B+(Bo,Dd). Which of the following blood group cannot be inherited by their children?
A) A+
B) B+
C) AB+
D) AB-
E) O+
Ans. D

Q. ESR dec by inc. in:
A. Temp
B. Cholesterol
C. Albumin
Ans. C

Remember
ESR is directly proportional to fibrinogen and alpha globulin
ESR is indirectly related to albumin

Q. Germinal centers are located in:
A. Cortex of lymph node
B. Medulla of lymph node
C. Thymus
D. Spleen
Ans. A

Q. Male patient dre painful prostate no growth on culture:
A. HIV
B. Candida
Ans. A (HIV prostatitis)

Q. Most common cause of septic meningitis:
A. S. Pneumoniae
B. Gp B Streptococcus
C. N Meningitidis
Ans. A

Q. Most potent antioxidant:
A- Vitamin E
B- Vitamin A
C- Vitamin C
D- Glutathione
Ans: D

Explanation
Potent Antioxidants – Glutathione > Vit. E > C> A

Q. Main bulk of hair shaft is formed by:
A. Cortex of hair
B. Matrix of hair
C. Spinosum
D. Basale & spinosum
E. Stratum Basale
Ans. A

Q. A 15 years old boy presents with loss of appetite, vomiting, yellow colour urine and yellow sclera (Jaundice). Which test should be done?
A. Bilirubin and ALP
B. Hepatitis A and B serology
C. Bilirubin and ALT
D. Hepatitis C serology
Ans. C

Q. What is true regarding hypertrophy?
A. Increase DNA content
B. Increase skin thickness
C. Increase RNA content
Ans. A

Q. Severe diarrhea causes:
A. Metabolic acidosis
B. Hyponatremia
Ans. A

Remember:
Severe/acute diarrhea ➡ Metabolic acidosis.
Chronic Diarrhea ➡ Metabolic alkalosis

Q. Medical ethics is study of:
A. Conduct of doctor's professional life
B. Moral of conduct of doctors professional life
C. Working of doctor in professional life
Ans. B

Q. Medical ethics:
A. Study of moral ethics of doctors professional life

B. Is the study of legal aspects of a doctor's professional life
C. Is code of conduct of doctors professional life

Ans. A

Q. Force of heart contraction depends on:
A. Length of preexisting muscle fibers
B. Gap junctions

Ans. A

Q. 18 year old boy presents with pallor, lymphadenopathy, and hepatosplenomegaly. On peripheral picture, blast cells are seen, (90%). Which stain should be used for diagnosis?
A. Sudan black
B. PAS
C. Acid phosphatase
D. Apple green

Ans. A (AML)

Q. Ameboid locomotion:
A. Produced by cilia
B. Helps in migration of germ cells

Ans. B

Q. Ameboid locomotion is seen in:
Ans. WBCs

Remember:
Ameboid like wbcs and whip like in sperms

Q. Cyanosis is due to:
Ans. Deoxyhemoglobin

Q. Erythropoietin acts by:
A. Camp
B. Cgmp
C. Tyrosine kinase
D. JAK/stat patway

Ans. D

Q. Epinephrine released from adrenal medulla causes vasodilation by which receptor?
A. B1
B. B2
C. Alpha 1
D. Alpha 2

Ans. B

Q. Pregnant female came in 5th month of pregnancy with thyrotoxicosis which drug should be given?
A- PTU
B- Methimazole
C- Beta blocker
D- Iodine
E- Thyroxine

Ans: B

Explanation:
Anti-Thyroid in 1st Trimester – PTU
Anti-Thyroid in 2nd & 3rd Trimester – Methimazole
Anti-Thyroid for Thyroid Storm -PTU
Crosses Placenta and affect Fetus – Methimazole > PTU

Q. Transitional epithelium of urinary bladder is derived from?
A. Endoderm
B. Endoderm + mesoderm

Ans. A

Don't get confused by the following two different statements:
Transitional epithelium - Endoderm
Bladder epithelium - Endo + Meso

Q. A female after coming from foreign develops lesion/nodules on the side of her face and eye vision issue increasing gradually.Relate to which of the following?/ A farmer living near the river bank develops blindness:
A. Onchocerca volvulus
B. Loa Loa

Ans. A

Q. A women after returning from Africa comes to you with swollen eyes and worm in eye. Organisim is?
A. Loa Loa
B. Ascaris

Ans. A

Q. A case of anemia with lab findings. RBC Size 5.5um and thin rim of redness in periphery diagnosis:
Ans. Microcytic hypochromic

Q. Sensory supply of the sole of foot:
Ans. Post Tibial

Q. Pethidine preferred over morphine because:
A. Less Potent
B. No Cough
C. Fast acting
D. Less addictive

Ans. C

Q. A patient is known case of hepatitis B to monitor whether he is developing liver failure or not best marker is?
A. Serum albumin

B. PT
C. Serum bilirubin
D. SGPT
Ans. B

Q. Best Monitoring test for Hepatitis B:
A. GGT
B. SGPT
C. PT
D. Serum bilirubin
E. Alkaline phosphatase
Ans. B

Q. Man working in demolition factory presents with weight loss, night sweats and low grade fever. Cause?
A. Asbestosis
B. Bysinossis
C. TB
D. Silicosis
Ans. D

Remember:
Cause – silicosis
Diagnosis – TB

Q. Most common location of thyroglossal cyst:
A. Thyrohyoid region
B. Suprahyoid
C. Infrahyoid above sternum
Ans. C

Q. Lady had a difficult labour at home in village. She was brought to hospital with history of PV bleed & oozing from gums for the last 10 hours. Her CBC shows 6 g/dl, platelets 30,000, TLC 24000 with neutrophilia, The peripheral blood film shows blurr cells. Her PT & APTT were prolonged. Most likely cause is:
A- DIC
B- ITP
C- Septicemia
D- Hemophilia
E- Postpartum hemorrhage
Ans: A

Q. After RTA patient was unable to pass urine nerve root involve:
A- S2, S3, S4
B- L1, L2, L3
C- L3, L4
D- L4, L5
Ans: A

Q. A patient of trigeminal neuralgia, some inj was given to him. location of the ganglia:
Ans. Middle Cranial Fossa (trigeminal ganglion)

Q. Alzheimer's disease has relation with which of following disorder?
A- Down syndrome
B- Klinefelter syndrome
C- Patau syndrome
D- Edward syndrome
E- Marfan syndrome
Ans: A

Q. An otherwise healthy infant boy born via vaginal delivery has an abnormal appearance of his right upper limb. His arm hangs by his side, pronated and medially rotated. Which of the following muscles is still functioning in this patient?
(A) Biceps
(B) Deltoid
(C) Infraspinatus
(D) Supraspinatus
(E) Triceps
Ans. E (damage is to upper trunk of brachial plexus "Erb's palsy")

Q. Friedlander pneumonia caused by:
A. Klebsiella pneumonia
B. Influenzal pneumonia
C. Streptococcal pneumonia
Ans. A

Q. Person who recently took membership of swimming pool classes developed brain abscess. Cause:
Ans: Naegleria fowleri

Q. Highest potential difference in the wall of stomach is when?
A. Aspirin ingestion
B. HCL is not secreted and gastric mucosa is intact
C. HCL is secreted and gastric mucosa is damaged
Ans. B

Q. Pressure in aorta is maximum during:
A. Rapid ejection
B. Slow ejection
Ans. B

Q. Increased a wave in JVP due to:
A) Aortic stenosis
B) Tricuspid stenosis

C) Mitral stenosis
Ans. B
Q. Most imp response in shock as a whole:
A- CNS ischemic response
B- Baroreceptor
C- Sympathoadrenal response
D- Cortisol
Ans: C
Q. Seventh bronchopulmonary segment in left lung called?
Ans. Medial basal
Q. Labetalol acts on:
A. Alpha
B. Beta
C. Both Alpha And Beta
Ans. C
Q. Effective way to prevent heat loss:
Ans. Cutaneous Vasoconstriction
Q. Fate of protein lost in tissue fluid:
Ans. Returned By Lymphatic
Q. Gravida 2, first pregnancy normal , 2nd boy delivered at 32 weeks with hydrops fetalis, icteris phase, exchange transfusion done what is the type of immunity?
A- Type IV hyprsensitivity
B- Complement mediated hypersensitivity
C- Antireceptor antibody
D- Self tolerance
E- Autoimmune complex formation
Ans. B (type 2 hypersensitivity – Alpha thalassemia)
Q. Microscopic diagnostic feature of TB lesion is?
A. Caseous necrosis
B. Epithelioid cells
C. Langerhans cells
D. AFB
Ans. A
Q. Hydrops fetalis occurs to RH –ve mother and RH +ve father. What type of hypersensitivity reaction occurred?
A) 1
B) 2
C) 3
D) 4
Ans. B
Q. Major blood buffer:
A- Ammonia
B- HCO_3
C- Hb
D- Proteins
E- Calcium carbonate
Ans: B
Explanation:
Major blood / Extracellular / Interstitium / Plasma Buffer – Bicarbonate
Major rbcs buffer – Hemoglobin
Major Intracellular Buffer – Proteins
Major Renal Buffer – Phosphate
Exclusive Renal tubular buffer –Ammonia
Major urinary buffer (quantitatively) - Ammonium
Q. Major bone buffer is which of following?
A- Ammonia
B- HCO_3
C- Hb
D- Proteins
E- Calcium carbonate
Ans: E
Explanation:
Major blood / Extracellular / Interstitium / Plasma Buffer – Bicarbonate
Major RBCs buffer – Hemoglobin
Major Intracellular Buffer – Proteins
Major Renal Buffer – Phosphate
Exclusive Renal tubular buffer –Ammonia
Major urinary buffer (quantitatively) - Ammonium
Q. Stratified cuboidal cells in:
A. Renal collecting tubule
B. Renal convoluted tubules
C. Duct of submandibular gland
Ans. C
Q. Intestinal epithelium:
A. Differs from epithelium of the stomach
B. Villi are absent in duodenum
Ans. B
Q. Rt. kidney is anteriorly related to?
A. Hepatic flexure
B. 2nd part of duodenum
C. Liver
Ans. B
Remember:
Rt. Kidney → Liver
Rt. Kidney Hilum → 2nd part of Duodenum
Q. Calcitonin tumor of origin:
A. Pancreatic endocrine cells
B. Rathke pouch
C. Thyroid

D. Pth

Ans. C (Medullary thyroid CA)

Q. Gastric juice has which enzyme in it:

A. Lipase
B. Amylase
C. Pepsinogen
D. Pepsin

Ans. D

Q. A 22-year-old second-year medical student develops a "red" face after being asked a question during lecture. Which of the following statements best describes this vascular reaction?

A. Active hyperemia
B. Acute congestion
C. Nonpalpable purpura
D. Passive hyperemia
E. Petechial hemorrhage

Ans. A

Q. 9 months girl vaccinated 2 weeks back now develops rash over body, fever, CBC reveals Hb 13 WBC 6 *10 and decrease Platelets peripheral smear shows large Platelets Diagnose is:

A- TTP
B- Anemia
C- ITP
D- Thalassemia
E- Iron deficiency anemia

Ans: C

Explanation:

Vaccination + Low Platelets + Giant Platelets – ITP

Normal or slight Low Platelets + Giant Platelets + Bernard Soulier Syndrome

Q. A female having postpartum hemorrhage during delivery of twins after that she can't lactate her babes even her desire to lactate, she also complain that she remain 6 month lethargic after delivery where is problem that she can't lactate?

A- Pituitary adenoma
B- Sheehan syndrome
C- Shemron syndrome
D- Prolacinoma

Ans: B

Q. 'Goiter' is due to deficiency of:

A. Iron
B. Protein
C. Vit. D
D. Folic acid
E. Iodine

Ans. E

Q. Patient with exophthalmos, weight loss, diarrhea, serum iodine level low, goiter, what's the reason?

A- Low dietary intake
B- Defective absorption.
C- Inappropriate intake of water and food.
D- Intrinsic metabolic defect

Ans. A

Q. New born with in 3 hrs with jaundice, which kind of bilirubin will be raised?

A. Unconjugated
B. Conjugated
C. Urobilnogen

Ans. A

Q. Derivative of neural crest cells is:

A. Melanocytes
B. Autonomic ganglia
C. Lens of eye
D. Cardiac chambers

Ans. A > B (both are derivatives of neural crest)

Q. Stroke and brain tissue are damaged, now repair is by?

A. Neuron
B. Glial cell
C. Fibroblast
D. Schawn cell

Ans. B

Q. A child diagnosed to have blue cell tumor with Gene amplification and high catecholamine. Which of the following best describes the condition?

A) Pheochromocytoma
B) Pituitary adenoma
C) Ewing sarcoma
D) Nephroblastoma
E) Neuroblastoma

Ans. E

Q. A 3-year-old girl is brought to the emergency room after her parents felt an abdominal mass during her bath. She is asymptomatic except for the mass, which is irregular, firm, and clearly crosses the midline, ruling out Wilms tumor. A week later, a biopsy of the mass comes back with rosette

formation seen on histology and small round blue cells. Diagnosis?

Ans. Neuroblastoma

Nephroblastoma does not cross midline and it is smooth

Q. Primordial germ cells incorporated in gonads in sex cord in?

A. 3rd week
B. 4th week
C. 5th week
D. 6th week

Ans. D

Q. Small intestine total surface area of absorption:

A. 200
B. 350
C. 400

Ans. B

Q. Clara cells are found in:

Ans. Terminal bronchioles

Q. Which CNS tumour is caused mostly by radiation?

Ans. Meningioma

Q. Ectopic thyroid hormone is produced by:

Ans. Squamous cell CA of lung

Also remember:

Ectopic thyroid hormone is produced by

Sq Ca lung
Sq Ca larynx
Sq Ca bronchi

Q. A young man bought in emergency in semiconscious state. After treatment he became conscious and wwas discharged the next day. He came with blindness. In that hospital methyl alcohol assay was not available. Which of the following will be used to assess his condition?

A. Blood osmolality
B. Urine osmolality
C. Plasma osmolality

Ans. C (methanol ingestion caused increased serum osmolality)

Q. A patient came with fever and neutropenia. On blood culture pseudomonas aeruginosa was positive. Which of the following is responsible for this condition?

Ans. TNF

Q. Which of the following is a true hermaphrodite?

Ans. XX

Q. Karyotype of turner's syndrome:

Ans. 45XO

Q. A patient after multiple blood transfusions presented with raised glucose level of blood along with liver cirrhosis and pigmentation of skin. Diagnosis?

Ans. Hemochromatosis

Q. Which of the following is acid fast bacillus?

Ans. Nocardia

Q. Type of epidermis found in palm and sole?

Ans. Stratum lucidum

Q. Absence of cell wall in:

Ans. Mycoplasma

Q. Which indicated blood group on RBC?

Ans. Terminal sugar chains/molecules

Q. Ingestion of undercooked meat resulting in brain cysts?

A. Tenia solium
B. Echinococcus

Ans. A

Q. Which is motile?

Ans. Treponema pallidum

Q. Mode of transmission of pin worm:

Ans. Food contaminated with eggs (don't confuse with larvae trophozite etc…EGGs is the correct option to pick)

Q. Which of the following infection is caused by taking unpasteurized milk?

Ans. Brucella

Q. Which of the following is obligating intracellular?

A. H influenza
B. Neisseria
C. Chlamydia

Ans. C (remember Rickettsia is also an obligate intracellular organism)

Q. Mechanism of obligate intracellular:

A. Host RNA dependent
B. Host DNA dependent
C. ATP dependent

Ans. B

Q. Spore forming bacteria:

Ans. Clostridium

Q. Lipofuscin found in:

Ans. Heart, liver

Q. Meningitis in newborn:

Ans. Group B streptococcus > E. coli

Q. Which of the following bacteria causes lethal diarrhea?

Ans. C. botulinum

Q. A scenario with triad of splenomegaly, neutropenia, sinus bradycardia:

Ans. Typhoid fever

Q. The gland on detailed study under microscope with predominant mucinous acini with scant serous acini:

A. Parotid
B. Sublingual
C. Submandibular

Ans. B

Q. Solution used for disinfection of endoscope:

Ans. 2% glutaraldehyde

Q. A female silicone breast implant. Implant removed but she complained of discharge from that breast. On examination of discharge the following types of cells are found

A. Plasma cells
B. Giant cells , lymphocytes and plasma cells
C. Neutrophils
D. T cells

Ans. B

Q. Which of the following is given to prevent osteoporosis?

Ans. Estrogen

Q. A female presented with bilateral polycystic ovaries, which test is not usually performed in this case?

A. LH>FSH
B. Inc testosterone
C. Increased estrogen
D. Insulin resistance

Ans. D

Q. Which of the following is autosomal dominant?

Ans. Hereditary spherocytosis

Q. T cells found in lymph node in:

A. Germinal center
B. Medulla
C. Paracortex

Ans. C (Deep paracortex)

Q. An old man presented with fluid filled blisters in a dermatomal distribution on trunk:

A. HSV 1
B. Varicella zoster

Ans. B

Q. Which of the following causes vesicles on genitalia?

A. HSV1
B. HSV2

Ans. B

Q. By which method surgical instruments containing spores and bacteria are sterilized?

A. Autoclaving
B. Dry heat

Ans. A

Q. Antigen binding site on antibody:

Ans. Variable part of light and heavy chain

Q. Organism found in macrophages:

Ans. Histoplasma (in reticuloendothelial cells)

Q. Parathyroid hormone is produced by:

Ans. Chief cells

Q. A smoker's lung biopsy was done showing patchy distribution of squamous epithelium amongst columnar epithelium. This is example of

Ans. Metaplasia

Q. Anaplasia:

A. Replacement of one epithelium by other
B. Poorly differentiated
C. Very aggressive

Ans. B

Q. Digeorge syndrome:

T cells deficient

Q. In polycythemia rubra vera:

A. Erythropoietin decreased
B. Erythropoietin increased

Ans. B

Q. Metastatic calcification is seen in:

A. Liver
B. Bones
C. Kidney

Ans. C

Q. Two groups of hypertensive patients. One was treated surgically, other with antihypertensive. Which complication was seen in medically treated patients?

A. Hyperkalemia

B. Hypernatremia
C. Hypocalcemia

Ans. A

Q. Most specific for SLE:

Ans. Anti ds DNA antibodies

Q. Amyloidosis light chain is feature of:

Ans. Systemic amyloidosis

Q. Which of the following is caused by a virus?

Ans. T cell lymphoma (HTLV)

Q. Lytic bone lesions are seen in the following disease:

Ans. Multiple myeloma

Q. A scenario with neurological signs, plus renal with jaundice and shistocytes:

Ans. TTP

Q. A baby born with hydrops fetalis, anisocytosis, poikilocytosis and died. Diagnosis?

A. Alpha thalassemia
B. Hereditary spherocytosis
C. Sickle cell

Ans. A

Q. Most common type of Hodgkin's lymphoma:

Ans. Nodular scelrosing

Q. A 20 weeks pregnant lady on 2 consecutive OGTT test after 1 hour 5mmol, 2 hour 10.2 mmol, 3 hour 8 mmol, 4 hours dec 5 hr dec. What is your diagnosis?

A. GDM
B. Diabetes insipidus
C. Impaired glucose tolerance

Ans. A

Q. A 9 yrs old girl presented to you with sob. On ascultation chest was clear. No murmer or gallop was found. Chest xray shows hilar lympadenopathy and 1 cm nodule in right middle lobe but no infiltration or mass. Sputum and blood tests are negative. Dx:

A. Infectious mononucleosis
B. Arterial myxoma
C. TB
D. Carcinoid tumour

Ans. D

Carcinoid Tumor

Most commonly occurs in Appendix.

Most commonly occurs due to a carcinoid tumour in Termina Ileum.

Carcinoids of Appendix rarely metastasize hence they don't manifest as Carcinoid Syndrome.

Carcinoids of ileum metastasize hence cause Carcinoid Syndrome>

Q. In giant cell tumour which part of bone will be affected?

Ans. Epiphysis

Q. Mechanism of action of interferon:

Ans. Inhibit replication of both RNA and DNA

Q. Woman presented with PPH. BT inc, PT inc, APTTinc. Most diagnostic finding:

Ans. FDPs

Q. A patient came in emergency with severe pain in umblical area. On investigation acute appendicitis was diagnosed. Which of the following is responsible for the pain?

Ans. Prostaglandin and bradykinin

Q. In duchenne muscular dystrophy, which of the following is absent/deficient?

Ans. Dystrophin

Q. A patient after PPH failed to lactate, what else would be found:

A. Hypothyroidism
B. DM
C. Increase plasma osmolality

Ans. A

Q. Most common cause of UTI:

Ans. E.coli

Q. A scenario of CML, which stain ins used to visualize the cells?

A. Alkaline phosphatase (LAP)
B. Sudan blue
C. Evan's blue

Ans. A

Q. RBC breakdown/lysis occurs in:

Ans. Spleen

Q. A scenario with decreased pH, normal PCO_2, decreased HCO_3. What will be present?

A. Increased acid in urine
B. Decreased acid in urine

Ans. B

Q. A scenario with decreased serum calcium, increased phosphate, increased PTH

Ans. CRF

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PATHOLOGY – 2017

Q. Middle aged male rock crusher presented with complaint of cough cervical lymph nodes enlarged..chest x-ray shows lung infiltration..diagnosis:

A. Asbestosis
B. Bronchogenic CA
C. Silicosis
D. Anthracosis

Ans. C

Q. 3year old girl unvaccinated presented with fever neck stiffness CSF culture shows gram -ve coccobacilli. Causative organism

A. Haemophilus influenzae
B. Neseria meningitidis
C. Strep pneumoniae
D. Mycoplasma

Ans. A

Q. Female with burning micturation pus cells in urine culture gram -ve rods:

A. E.Coli
B. Klebsella
C. Neisseria gonorrhea
D. Streptococci

Ans. A

Q. Vomitnig may cause:

A. Acidosis
B. Hyperkalemia
C. Hyperchloremia
D. Hyponatremia
E. Hypernatremia

Ans. D

Q. A girl suffering from pyloric stenosis induced vomiting will have the following electrolyte imbalance:

A. Hypokalemic hyperchloremic metabolic acidosis
B. Hypokalemic hypochloremic metabolic alkalosis
C. Hyperkalemic hypochloremic metabolic alkalosis

Ans. B

Q. A boy is having dark coloured urine after treatment with antimalarials, what is most appropriate?

A. His father will have same problem

B. He will also have reaction with sulphonamide

Ans. B (G6PD deficiency)

Q. Bite cells are seen in:

A- Splenectomy
B- Sickle cell
C- Spherocytosis
D- G6PD

Ans: D

Explanation:

Heinz body and bite cells in – G6PD
Howel jowel bodies – Sickle cell and Splenectomy

Q. Boy with epistaxis BT >10minutes APTT raised PT normal diagnosis?

A. Factor 8 deficiency
B. Vit k deficiency
C. Von Willibrand
D. Christmas disease

Ans. C

Q. A young man presents with high grade fever, anemia and easy fatigability. Blood CP shows blast cells with scanty cytoplasm ha are CD 19 positive. Diagnosis?

A. ALL
B. AML
C. CML
D. CLL
E. Hairy cell leukemia

Ans. A

Q. On microscopy of lymph node, biopsy specimen, granuloma with caseous necrosis found for diagnosis of TB what should be looked for?

A- Coagulative necrosis
B- Langhans giant cells
C- Demonstration of AFB
D- Macrophage
E- Neutrophil

Ans: C

Q. Most important cell of chronic inflammation:

A. Fibroblast
B. Lymphocyte
C. Macrophage
D. Mast cell

Ans. C

Most important – Macrophage
Most abundant – Lymphocyte

Q. Patient had bruise on elbow, which changed colour from yellow to brown. Pigment?

A. Lipofuscin
B. Hemosiderin

Ans. B

Q. Smoker with brain mets will have primary tumor in:

A. Liver
B. Lung
C. Bladder
D. Bone

Ans. B

Q. Oropharyngeal squamous cell carcinoma due to:

A. EBV
B. HIV
C. HPV

Ans. C

Q. Acrosomes of sperms are formed by:

a. Golgi apparatus
b. Smooth endoplasmic reticulum
c. Rough endoplasmic reticulum
d. Lysosome

Ans: A

Q. Basic structure of Organs in Embryo laid down by:

a. 6 weeks
b. 2 months
c. 3 months
d. 4 months

Ans: A

Q. Basophillia of pancreatic cells is due to:

a. SER
b. RER
c. Ribosomes
d. Golgi bodies

Ans: C

Q. Best fiber dietary supplement:

a. Bread
b. Eggs
c. Milk
d. Vegetables

Ans: D

Q. Blood supply of thymus:

a. Costocervial trunk
b. Inferior thyroid
c. Thoracocervical trunk
d. Subclavian

Ans: B

Q. During surgery for osteoma, bone was removed. Which of the following is responsible for producing new bone, that will renuite the two broken fragments?
a. Haversian canal
b. Spongy bone
c. Periosteum
d. Compact bone
Ans: C

Q. Internal capsule is medial to:
a. Globus Pallidus
b. Caudate Nucleus
c. Raphe Nucleus
d. Suprachiasmatic nucleus
Ans: A

Q. Calcium in Smooth Endoplasmic reticulum of skeletal muscles is bound by:
a. Troponin T
b. Calcequestrin
c. Troponin
d. Desmin
Ans: B

Q. A patient presented after road traffic accident with complete paralysis of intercostal muscles with intact spontaneous respiration, lesion is at which level of spinal cord:
a. C6
b. T4
c. T12
d. T1
Ans: A

Q. Correct sequence of events in Infective Endocarditis:
a. Valve damage-Thrombus-perforation-Emboli
b. Damage valve-bacterimia-thrombus – Perforation
c. Valve damage--thrombus-bacterimia – Perforation
d. Valve damage--thrombus-septicemia – bacteremia
Ans: C

Q. Cross section of Medulla Oblongata right bellow pons will show Sensory decussation (Pyramidal decussation (right):
a. Ipsilaterally
b. Contralaterally
c. Below the lesion
d. Above the lesion
Ans: A

Q. Dermatome just below the clavicle:
a. C5
b. T1
c. C4
d. C3
Ans: C

Q. Difference between osmolarity of Plasma and Interstitial fluid:
a. 2 mosm/L
b. 1 mosm/L
c. 1.5 mosm/L
d. 3 mosm/L
Ans: B

Q. A patient came with complain of Face and upper limb palsy with dilated pupil. Which artery damaged?
a. ACA
b. MCA
c. PICA
d. ASA
Ans: B

Q. Sequence of arteries in kidney:
a. Renal artery > interlobar> arcute> affernt arteriole
b. Renal artery>interlobar>arcuate> interlobuler>affernt arterioles
c. Interlobar>Afferent> Renal>Efferent
d. Renal artery > arcute > interlobar> Affernt arteriole
Ans: B

Q. Fluid of Choice in Aciduria:
a. Lacated ringers
b. Ringers
c. Dextran
d. Normal saline
Ans: D

Q. For measuring Cardiac Output by dilution method sample should be taken from:
a. Aorta
b. Renal Artery
c. Saphenous vein
d. Jugular vein
Ans: A

Q. Zona Glomerulosa is primarily controlled by serum levels of:

a. Sodium
b. Potassium
c. ADH
d. Renin
Ans: B

Q. Heparin and Histamine are released by:
a. Basophils
b. Eosinophills
c. Mast cells
d. Megakaryocytes
Ans: C

Q. Maximum therapeutic dose of which of the following can be given in renal failure:
a. Ampicillin
b. Ceftazidine
c. Tetracycline
d. Quinolones
Ans: B

Q. MOA of quinolones:
a. Inhibit DNA gyrase
b. Reverse trascriptase
c. Inhibit Squalene epoxidase
d. Inhibit D-ala D-ala
Ans: A

Q. Most important mediator of allergy and pain:
a. HCL
b. Bradykinin
c. CCK
d. Pepsin
Ans: B

Q. In which of following, there would be no role of chromosomal movement?
a. Cleavage of cytoplasm.
b. Meiosis 1
c. Meiosis 2
d. Asexual reproduction
Ans: A

Q. For NIDDM patients, drug of choice would be:
a. Insulin
b. Sitagliptin
c. Metformin
d. Tolbutamide
Ans: C

Q. Twenty-seven years' female got minor trauma after which there is numbness in arms at lateral side and bicep reflex diminished, root values injured:
a. C3-C4
b. C1-C2
c. C3-C6
d. C5-C6
Ans: D

Q. Which one of the following is the Outermost layer of nerve?
a. Epineurium
b. Endoneruium
c. Perineurium
d. Perimysium
Ans: A

Q. Patient got hit at side of face which causes swelling in temporal region: Cause
a. Maxillary division of Ext Carotid
b. Middle Meningeal
c. Posterior meningeal
d. Anterior spinal
Ans: B

Q. Patient in the habit of chewing something which developed Fibrosis of his sublingual mucosa. What kind of change is it?
a. Metaplasia
b. Dysplasia
c. Premalignant
d. Malignant
Ans: C

Q. Patient with diarrhea has which type of anion gap?
a. Normal anion gap metabolic acisosis
b. Low anion gap metabolic acidosis
c. High anion gap metabolic acidosis
d. Metabolic alkalosis
Ans: A

Q. Old Patient presented after bout of Hysteria, with PH 7.55:
a. Respiratory Acidosis
b. Compensated Resp Acidosis
c. Respiratory Alkalosis
d. Metabolic alkalosis
Ans: C

Q. Perception of thirst is decreased somewhat by:
a. SIADH
b. Increased osmolarity of water
c. TSH

d. Gastric filling/ Gastric Distension
Ans: D

Q. Policeman presents a case of Opioid and Cannabis abuse; first reaction of patient will be:
a. Denial
b. Depressed mood
c. Authoritarian
d. Euphoria
Ans: A

Q. Potassium sparing diuretic:
a. Ethacrynic acid
b. Amiloride
c. Furesimide
d. Hydrochlorthiazide
Ans: B

Q. RBCs loose nuclei in which stage of development:
a. Reticulocyte
b. Erhtyroblast
c. Late normoblast
d. Early normoblast
Ans: C

Q. A female present with Dysphagia and Hoarseness. Which of the following injured?
a. Upper part of Nucleus Ambiguous
b. Middle part of Nucleus Ambiguous
c. Lower part of Nucleus Ambiguous
d. Dorsal Ganglia of X Nerve
Ans: B

Q. Sesamoid cartilage is present in:
a. Ala of nose
b. Epiglottis
c. Pinna of ear
d. Trachea
Ans: A

Q. Bilateral nerve lesion causing death:
a. Fascial nerve
b. Accessorry
c. Vagus
d. Trigeminal
Ans: C

Q. Short acting Insulin:
a. NPH insulin
b. Lente insulin
c. Glargine
d. Regular
Ans: D

Q. Single breath Nitrogen is used to measure:
a. Residual Volume
b. FRC
c. Physiological deadspace
d. Anatomical dead space
Ans: D

Q. Sodium potassium ATPase activity is increased by:
a. Adrenaline
b. Insulin
c. Noradrenaline
d. Dopamine
Ans: B

Q. Spinal Cord at level of L4 does not have:
a. Anterior horn
b. Posterior horn
c. Lateral horn
d. Grey matter
Ans: C

Q. True about abdominal aorta:
a. Gives branch to Supra renal glands
b. Gives superior phrenic artery immediately after formation
c. Splenic vein lies posterior
d. Give splenic vein branches
Ans: A

Q. Acetazolamide used with caution because of increased risk of:
a. Metabolic alkalosis
b. Metabolic acidosis
c. Respiratory acidosis
d. Respiratory alkalosis
Ans: B

Q. Amenorrhea during pregnancy is due to:
a. Decreased GnRH from Hypothallamus
b. Decrease Prolactin
c. Increase GnRH from Hypothallamus
d. Increase GH
Ans: A

Q. Based on cell history, which of the following is different:
a. Osteoblast
b. Osteoclast
c. Osteocyte
d. Chondroblast
Ans: B

Q. Cardiac Plexus having:

a. Both sympathetic and parasympathetic
b. Only symphatic
c. Only Parasympathetic
d. Somatic
Ans: A

Q. Case of ambiguous genitalia:
a. Addison
b. CAH
c. CHD
d. Adrenal crises
Ans: B

Q. Cervical branch of facial supplies:
a. Platysma
b. Geniohyoid
c. Sternohyoid
Ans: A

Q. Cervical change in uterine prolapsed:
a. Hyperplasia
b. Dysplasia
c. Metaplasia
d. Chronic cervicitis with metaplasia
Ans: D

Q. Cheilosis, corneal vascularisation cause is deficiency of:
a. Calcium
b. Niacin
c. Zinc
d Riboflavin
Ans: D

Q. Child of consanginuous marriage showing short limbs, which trait?
a. X linked recessive
b. Autosomal Recessive
c. Autosomal dominant
d. X linked dominant
Ans: C (Achondroplasia)

Q. Child with acute severe asthma treatment should begin with:
a. Oral prednisone
b. Inhaled ipratropium
c. IV antihistamine
d. Nebulized salbutamol
Ans: D

Q. Cortocospinal tract is closely associated in function to:
a. Vestibulospinal tract
b. Rubrospinal tract
c. Corticospinal tract
d. Spinothlamic tract
Ans: B

Q. CSF is absorbed from:
a. NK cells
b. Epndymal cells
c. Arachnoid villi
d. Loop of Henle
Ans C

Q. Action of Asprin by:
a. Increrasing PGs
b. Increasing Leukotrines
c. Decreasing Prostaglandins
d. Inhibit Monocytes
Ans: C

Q. Action of Nsaids by:
a. Increasing COX
b. Inhibiting COX
c. Inhibit NK cells
d. Inhibit PDE
Ans: B

Q. Data collected on basis of presence or absence of vomiting:
a. Discrete
b. Nominal
c. Histogram
d. Ordinal Data
Ans: B

Q. Dorsal Leminiscus injured which sensation lost:
a. Temperature
b. Vibration
c. Crude touch
d. Pain
Ans: B

Q. Drug of choice in cerebral edema:
a. Oxytocin
b. Furosemide
c. Acetazolamide
d. Mannitol
Ans: D

Q. Epidural space extends from:
a. Foramen magnum to sacrococcygeal ligament
b. Foramen magnum to s1 vertebra
c. C1 to Sacrococcygeal membrane
d. C1 to S1
Ans: A

Q. Esophagus is most constricted at:
a. Cricoid
b. Left broncus crosses it
c. At diaphragm
d. At junction with stomach

e. Cricopharyngeus
Ans: E
Q. Femoral hernia passes posteriorly to:
a. Femoral vein
b. Inguinal ligament
c. Lacunar ligament
d. Coopers ligament
Ans: B
Q. Fibro Cartilage is present in:
a. Ear Pinna
b. Disc of Joints
c. Pubic symphesis
d. Nose
Ans B
Q. Foreign body in normal position loged in:
a. Right lower bronchus
b. Left bronchus
c. Left upper bronchus
d. Right middle bronchus
Ans: A
Q. Fourth Heart sound:
a. Rapid ventricular filling
b. Ventricular filling due to Atrial systole
c Ventricular filling due to Atrial diastole
d Ventricular filling due to Ventricular systole
Ans: B
Q. Gastric motility decreased by:
a. Aluminium hydroxide
b. Magnesium hydroxide
c. NaHCO3
d. Motilium
Ans: A
Q. Grade 4 liver failure caused by which drug in high doses:
a. Pantazosin
b. Paracetamol
c Aspirin
d Celocoxib
Ans: B
Q. Heat loss in patient on ETT:
a. Convection
b. Conduction
c. Evaporation
d. Radiation
Ans: C
Q. Heavy water is used to measure:
a. Total body water
b. Interstitial fluid volume
c. Plasma volume
d. ECF
Ans: A
Q. In moderate exercise minimul change in circulation will be:
a. Kidney
b. Brain
c. SK muscle
d. Liver
Ans: B
Q. Isoosmolar with blood volume:
a. 9 gm of nacl in 1000 ml
b. 0.9 gm in 1000ml
c. 0.9 gm in 1000ml
d. 1.8 gm in 2000ml
Ans: C
Q. Maximum water reabsorbtion:
a. CT
b. DCT
c. Loop of henle
d PCT
Ans: D
Q. Morphine is used in:
a. Local anesthesia
b. Chronic malignancy
c. Acute pain
d. Post Surgery pain
Ans: B
Q. Most common lesion in Anthrax:
a. Skin lesions
b. GI hemorrhage
c. Liver failure
d. Septicemia
Ans: A
Q. Most ECF volume is increased by:
a. Isotonic Saline
b. Hypotonic saline
c. Hypertonic saline
Ans: C
Q. Most imp chemotactic factor:
a. C5b
b. C3b
c. LTB4
Ans: C
Q. Most potent antiemetic:
a. Antihistamine
b. Ondensatron
c. Domperdone
d. Entox
Ans: B

Q. Most significant mediator of allergy:
a. Bradykinin
b. Histamine
c. Serotonin
Ans: B

Q. Myopia commonest cause:
a. Axial length of eyeball
b. Axis of eyeball
c. HPA Axis
Ans: A

Q. Neurovascular bundle lies between:
a. Trapizus muscle
b. External and intercostals
c. Inner most and endothoracic fascia
d. Internal and innermost muscles
Ans: D

Q. Nodes of Ranvier:
a. In Myelin sheath
b. Absent myelin sheath
c. Not important part
Ans: B

Q. Oncotic pressure of blood depends on:
a. Increase H^+
b. Albumin
c. Inc. PO4
d. Inc. Water
Ans: B

Q. Patient of spinal TB, LP was done. 6 ml fluid drawn, complain of headache due to:
a. Stretch of Falxcerebri
b. Stretch of tentorium cerebri
c. Stretch of Nucleus Accumbens
Ans: A

Q. Diabetic Patient presented in comatosed state, which insulin will be used?
a. NPH
b. Regular Insulin
c. Glargine
Ans: B

Q. Patient with Hypovolemic shock, which is increased?
a. Anaerobic respiration
b. Venous return
c. Contractility
Ans: C

Q. Patient with low HR, low BP, low CVP, low CO:
a. Hypovolemic shock
b. cardiogenic shock
c. cardiac temponade
d. Septic shock
Ans: A

Q. Patient with pruritis 2 years, jaundice 6 months, bilirubin raised, alt raised, ggt 220:
a. Extrahepatic cholestasis
b. Intrahepatic cholestasis
c. Haemolytic anemia
d. Hepatocellular CA
Ans: A

Q. PBC, confirmatory Investigation:
a. Anti SSA
b. ANA
c. Antimitochondrial antibodies
d. Anti DsDNA
Ans C

Q. Pneumothorax after RTA:
a. Lungs collapse outward and chest outwards
b. Lungs collapse outwards and chest inwards.
c. No change occurs
d. Lungs collapse inwards and chest outwards
Ans: D

Q. Portocaval anastomosis location is:
a. Lower Esophagus
b. Lower Anal
c. Upper esophagus
d. Axilla
Ans: A

Q. PR interval is decreased by:
a. First degree heart block
b. WPS syndrome
c. 2nd degree block
d. 3rd degree block
Ans: B

Q. Primary protection against microorganism:
a. Liver
b. Kidney
c. Heart
d. Skin
Ans: D

Q. Protection againt malignancy:
a. Necrosis
b. Gangrene
c. Apoptosis

d. Chronic ulcer
Ans: C
Q. Pulse pressure increased by:
a. Stroke volume
b. HR
c. CO
d. BP
Ans: A
Q. Pyogenic Lung abscess:
a. Pseudomonas
b. E.coli
c. Staph Aureus
Ans: C
Q. Radial artery cut, baroreceptor compensatory response will be through:
a. D fibers
b. C fibers
c. B fibers
d. A fiber
Ans: B
Q. Regarding motor inervation of muscles; which is true?
a. End plate potential at motor endplate is 20 mV less than the surrounding
b. One fiber innervates one muscle only
c. Innervates fibers close to endplate
d. One fiber innervates three muscles only
Ans: C
Q. Regarding respiration in Pregnancy, which one of the following is true?
a. Increase NO
b. Increase PCO_2
c. Increase TLC
d. Decrease Total Lung Capacity
Ans: D
Q. REM sleep has:
a. High amplitude waves
b. Low amplitude waves
c. Associated with dreaming
d. Increased muscle tone in adult
Ans: C
Q. Renal Column Contains:
a. Interlobar artery
b. Segmental artery
c. SMA
d. Celiac artery
Ans: A
Q. Sample for microscopy of leprosy can be taken from:
a. Ear
b. Skin
c. Renal
d. Nasal scrapings
Ans: D
Q. Special feature of 6th thoracic vertebra:
a. Bean shaped
b. Wedge shaped
c. Kidney shaped
d. Upper and lower surfaces of thoracic vertebrae are heart shape
Ans: D
Q. Subacute endocarditis caused by:
a. Strep Virridans
b. Staph aureus
c. E.coli
d. Pseudomonas
Ans: A
Q. Swollen parotid.usg shows stone in duct atrophic changes in gland are due to:
a. Gangrene
b. Necrosis
c. Apoptosis
Ans: C
Q. Thyroid isthmus crosses:
a. Tracheal segment 3 – 4
b. 2-3-4
c. Hyoid
d. 4, 5, 6
Ans: B
Q. True about CSF:
a. More proteins than plasma
b. More acidic than Plasma
c. More pressure thn venous sinuses
d. Absorbed by choroid plexus
Ans: B
Q. True about pseudostratified epithelium:
a. All cells lying at basement membrane
b. All have nuclei at the same level
c. All reach the apex
Ans: A
Q. UV light causes:
a. Target lesions
b. Fever
c. Non-lethal damage to gene
d. Tumor
Ans: D
Q. First sign of vitamin A deficiency:

a. Dermatitis
b. Gum bleeding
c. Night blindness
d. Headache
Ans: C

Q. Wave A to C on Jugular pulse is due represented on ECG by:
a. QT segment
b. RR interval
c. PR segment
d. ST segment
Ans: C

Q. Which of the following will have increase O_2 demand and decrease O_2 supply to heart?
a. Hypotension
b. Hypertension
c. Bradycardia
d. Tachypnea
Ans: B (if option of tachycardia present goes for that)

Q. Sample taken for ABGS will be arterial blood in = Heparinized syringe.

Q. Angle of Loius has:
a. Upper cuvature of aortic arch
b. End of thoracic duct
c. Azygous vein draining into SVC
d. Azygous vein draining into Renal vein
Ans: C

Q. Student observing surgery for the first time, he became faint because of Decrease blood volume:
a. Decrease peripheral vascular resistance
b. Decrease cardiac output
c. Increase stroke volume
d. Increase TPR
Ans: A

Q. A person is awake with eyes closed in a room with ambient temperature and no noise, the prominent EEG waveform would be:
a. Alpha
b. Beta
c. Gamma
d. Delta
Ans: A

Q. Preganglionic fibers are:
a. A-fibers
b. B- Fibers
c. C-Fibers
d. D-fibers
Ans: B

Q. Which one of the following provides poor bioavailability of minerals in the diet?
a. Roots
b. Green vegetables
c. Tubers
d. Cereals
Ans: C

Q. Which of the following nerve is formed by the first vertical third and fourth nerves?
a. Transverse Cervical
b. Auricotemporal
c. Occipital
d. Maxillary
Ans: A (So this was a confusing stem due to sheer wording, basically they are asking for origin by C3, C4)

Q. A person with epistaxis and haematuria presented with nasal septal perforation. On biopsy, a diagnosis of giant cell arteritis was made. The condition is consistent with:
a. Wegner
b. SLE
c. ATN
d. Temporal arteritis
Ans: D

Q. A person sustained trauma to the right sternoclavicular joint which was pushing posteriorly, damage to which of the following structures is most likely:
a. SVC
b. Aorta
c. Trachea
d. Right subclavian artery
Ans: D

Q. A male with tall elongated stature, no body hair and gynaecomastia:
a. Turner
b. Down
c. Klinefelter
d. Fragile X
Ans: C (Genetic diseases are very important, best would be to study from brs pathology)

Q. A pan chewer presented with a swelling in the mouth diagnosed on biopsy as submucosal fibrosis. The condition is:
a. Premalignant
b. Metaplasia
c. Dysplasia
d. Anaplasia
e. Benign
Ans: A (A Favourite BCQ of CPSP, repeated many times)

Q. A person presented with a swelling in the right buccal mucosa and was unable to move the angle of mouth. It was diagnosed as submucosal fibrosis. The likely complication seen in this case would be:
a. Submucosal fibrosis
b. Basal cell carcinoma
c. Squamous cell carcinoma
d. Ulceration
Ans: C

Q. The specific gravity of CSF is:
a. 1.0005 to 1.0009
b. Less than 1.0005
c. 1.0002 to 1.0003
d. Greater than 1.0000
Ans: A

Q. In a post-operative patient with asthma, the analgesic of choice is:
a. Ketorolac
b. Ibuprofen
c. Paracetamol
d. Pethidine
e. Morphine
Ans: D

Q. Cimetidine causes bleeding in a patient taking warfarin due to its effect by:
a. Increasing oral bioavailability of warfarin
b. Decreasing hepatic clearance
c. Increasing renal clearance
d. Displacing it from protein binding sites
Ans: B (Please memorize the table of p450 inducers and inhibitors, they definitely come in one way or the other)

Q. A substance found in renal artery but not in renal vein has been:
a. Filtered
b. Reabsorbed
c. Secreted
d. Clearance equal to GFR
Ans: D

Q. Microtubules are present in:
a. Nucleus
b. Cell membrane
c. Golgi
d. Ribosomes
e. Centrioles
Ans: E

Q. Case control study:
a. Speicific control
b. Disease and non-disease
c. Control Randoom trials
Ans: B

Q. CSF fluid with bacterial infection shows which of the following?
a. Low calcium
b. Low glucose
c. High glucose
d. Low Na
Ans: B

Q. A very long abdominal history of impaired fat absorption was given along with lab values and the question asked was, absorption of which of the following vitamin would be hampered:
a. Fat soluble
b. B Complex
c. B6
d. B12
e. Folate
Ans: A

Q. The most important finding in penicillin anaphylaxis:
a. Rash
b. Itching
c. Bronchospasm
d. Low blood pressure
Ans: C (for anaphylaxis, please remember its always bronchospasm, the stem may change if they ask allergic reaction instead of anaphylaxis)

Q. Fluid of choice in a patient with acidurea:
a. 5% Dextrose
b. Normal saline
c. Ringer lactate
Ans: B

Q. The ECG of a patient shows prominent spiked T waves. The abnormality he suffers from is:
a. Hypercalcemia
b. Hyperkalemia
c. Hypernatremia
d. Hypokalemia
Ans: B

Q. A person is in a prolonged coma. The area of the brain affected is:
a. Peri aque ductal
b. Internal capsule
c. Thalamus
d. Cerebellum
Ans: A (Repeated bcq and very favourite of cpsp, study tanveer notes, excellent stuff and exceptionally well written)

Q. Heat loss mechanisms are under the control of:
a. Preoptic hypothalamus
b. Posterior hypothalamus
c. Medial hypothalamus
d. Lateral hypothalamus
Ans: A (Another synonym for anterior to confuse the stem)

Q. Antibody involved in reaction to bee sting is:
a. IgA
b. IgG
c. IgE
d. IgD
e. IgM
Ans: C

Q. The following factor is responsible for production of neutrophils:
a. IL-8
b. G-CSF
c. TNF
Ans: B

Q. An IDDM patient is suffering from hypertension, the drug to be used with caution is:
a. Propranolol
b. Frusemide
c. Captopril
d. Verapamil
Ans: A

Q. The most common indication for use of ACE inhibitors is:
a. Patient with right renal artery stenosis
b. Essential hypertension
c. Patient with left renal artery stenosis
Ans: B (Rest are all contra indications and ACE and ARBS are now considered first line drugs for essential hypertension without complications, another frequently asked bcq)

Q. Which one of the following receives excitatory input from cerebral cortex but does not send any itself?
a. VPL
b. VPA
c. VPM
d. Substantia nigra
e. Caudate
Ans: D

Q. Woman had a polyp in the cervix. It was removed and histopath showed a portion of the polyp covered by squamous epithelium. The change is:
a. Metaplasia
b. Dysplasia
c. Anaplasia
d. Hypertrophy
e. Hyperplasia
Ans: A (Remember the definition, change of one epithelium to another is Meta and change/ loss of normal architecture is dysplaisa).

Q. A 30-year-old patient with two days' fever and infection presents with sudden onset of chest pain radiating to the back. On auscultation there is a rustling sound heard. There is inflammation of:
a. Myocardium
b. Pericardium
c. Pleura
d. Diaphragm
Ans: B (Rustling sound on ausculatation was the clicking point)

Q. Stratified cuboidal epithelium is present in:
a. Renal tubules
b. Urethra
c. Secretory ducts of salivary glands
Ans: C

Q. The anterior fontanelle:
a. Is present between three bones
b. Closes two to three months after birth

c. Closes before the posterior fontanelle
Ans: A

Q. Infarction of the left circumflex coronary artery, the area affected would be:
a. Left ventricle
b. Left atrium
c. Left atrium and ventricle
d. Septum
Ans: C

Q. In blockade of the central retinal artery, the change most likely seen would be:
a. Hemorrhage
b. Infarction
c. Caseous necrosis
d. Liquefactive necrosis
Ans: B

Q. Jejunum is supplied by:
a. SMA
b. IMA
c. Celiac
d. Hepatic
Ans: A

Q. The following lung volume cannot be measured on spirometry:
a. FRC
b. RV
c. TV
d. FRV
Ans: B

Q. A person has profuse diarrhea, the change most likely seen would be:
a. Increased ECF osmolarity
b. Decreased Na content of plasma
c. Decreased ECF osmolarity
d. Increased potassium
Ans: B

Q. The abrupt cessation of corticosteroids after three months would cause:
a. Inhibition of the hypothalamic pituitary axis
b. Activation of latent infections
c. Increased production of cortisol
d. Cushing syndrome
Ans: A

Q. Which of the following hormone works through CGMP?
a. Prolactin
b. ANP
c. Aldosterone
d. ADH
Ans: B

Q. U wave of ECG denoted repolarization of:
a. Purkinje fibers
b. Atria
c. Ventricles
d. Interventricular septum
Ans: A

Q. 5 years old child with fever and stiff neck, the most common cause of meningitis would be:
a. Staph
b. Strep
c. Viral
d. Neisseria
Ans: B

Q. In an ECG apparatus, waveforms can be recorded when:
a. Ventricles depolarize completely
b. Ventricles repolarize completely
c. During partial depolarization and repolarization
d. None of the above
Ans: C (In all other options, the waveform would be at the iso electric line)

Q. During running, the blood goes back to the heart through:
a. Valves
b. Contraction of leg muscles
c. Gravity
d. Increased heart rate
Ans: B

Q. The most important vitamin for myelination?
a. Vitamin A
b. Vitamin C
c. Vitamin B12
d. Vitmain B1
Ans: C

Q. Which of the following is pre-malignant?
a. Hamartomatous polyp
b. Leiomyoma
c. Adenoma
d. Actinic keratosis of skin
Ans: D

Q. A 45 years old man, heavy smoker diagnosed with lung disease was admitted and on the third day had

myocardial infarction, deteriorated and died. Finding in brain on autopsy would be:

a. Caseous necrosis
b. Coagulative necrosis
c. Fat necrosis
d. Liquefactive necrosis

Ans: **D** (Just to confuse you, and at the end the thing asked is a very repeated BCQ)

Q. A smoker working in the tyre industry was diagnosed as having malignant renal disease, the systemic changes are due to:

a. Smoking
b. Aromatic amines
c. Nitrites and nitrates
d. Benzene

Ans: **A** (please remember that both a and b are causative but it's a>b)

Q. A middle-aged lady with easy fatigue and breathlessness presented with tingling of the feet. The changes are consistent with:

a. Megaloblastic anemia
b. Folate deficiency
c. Iron deficiency anemia
d. Cardiac disease

Ans: **A**

Q. Sensory receptors of the body responding to high frequency vibrations are:

a. Pacinian
b. Golgi
c. Meissner
d. Merkel disc

Ans: **A**

Q. Sensory receptor responding to muscle tension:

a. Golgi Tendon
b. Merkel disc
c. Muscle spindle
d. None of the above

Ans: **A** (REMEMBER T for tension and T for tendon, S for stretch and S for spindle)

Q. The best place for lumbar puncture in an adult is:

a. Upper border of L4
b. Upper border of L5
c. Between L4 and L5
d. Below L5

Ans: **A**

Q. Which of the following intervention is diagnostic and therapeutic in a patient with pain in the viscera of the upper abdomen:

a. Celiac block
b. Spinal tap
c. Lumbar puncture
d. None of the above

Ans: **A**

Q.In a young girl, the secondary center of ossification would appear last in:

a. Lateral epicondyle of humerus
b. Medial epicondyle of humerus
c Head of humerus
d. None of the above

Ans: **A**

Q. Man, in a road traffic accident cannot move arm with loss of sensation on lateral side. Damage is at:

a. C5 C6
b. C6 C7
c. C5 C6 C7
d. C5 C6 C7 C8

Ans: **A**

Q. Root value of knee joint:

a. L1 L2
b. L2 L3
c. L3 L4
d. L2 L3 L4
e. L3 L4 L5

Ans: **C**

Q. Loss of innervation of S2S3S4 would cause:

a. Painless menses
b. Painless delivery
c. Rectal incontinence
d. None of the above

Ans: **C**

Q. Feco-oral route of transmission:

a. Hep. B
b. Hep. C
c. Hep. D
d. Hep. E

Ans: **D**

Q. Which one of the following is the most potent opsonin for neutrophils?

a. IgM
b. IgG
c. IgD

d. IgE
Ans: B
Q. Volatile acids are mainly removed from the body by:
a. Bicarbonate hydrogen buffer system
b. Phosphate system
c. Ammonia system
d. Hyperventilation
Ans: A
Q. CSF is absorbed mainly from:
a. Choroid plexus
b. Ventricular villi
c. Subarachnoid trabeculae
d. None of the above
Ans: C
Q. In stratified columnar all cells:
a. Reach the surface
b. Reach the base
c. Nuclei at the same level
d. None of the above
Ans: C (Pseudocolumnar epithelium – All cells touch the basement membrane)
Q. A small child with abdominal enlargement and swollen feet is due to:
a. Albuminuria and fluid retention
b. Fluid retention
c. Low birth weight
d. High Calcium diet
Ans: A
Q. Which one of the following drugs is administered as an inhalational form to prevent immunosuppression systemically?
a. Salbutamol
b. Theophylline
c. Na cromoglycate
d. Beclomethasone
e. None of the above
Ans: D (used as inhalational agent to prevent systemic corticosteroid induced immunosuppression)
Q. The umbilical vein degenerated after birth and forms:
a. Ligamentum teres
b. Median umbilical ligament
c. Lateral umbilical ligament
Ans: A
Q. Which of the following lobes of the lung has two segments?
a. Right superior
b. Right middle
c. Right lower
d. None of the above
Ans: B
Q. A middle-aged woman on an exclusive diet of green vegetables presented with weakness, fatigue and complaints of swelling of feet. A long profile of anemia was given but no differentiating characteristic of iron, folate or megaloblastic deficiency was given. The reason was asked:
a. Malnutrition
b. Renal failure
c. Cardiac disease
d. None of the above
Ans: A
Q. A new medical student observing surgery for the first-time faints, the reason is:
a. Decreased blood pressure
b. Decreased SVR
c. Decreased heart rate
Ans: B
Q. A patient has been diagnosed with AIDS. Which of the following viruses are most likely to be associated with Burkitt lymphoma associated with the condition?
a. EBV
b. CMV
c. HSV
d. HPV
Ans A
Q. In a marathon runner, the conservation of water is done through:
a. Aldosterone
b. ADH
c. Cortisol
Ans: B
Q. The hypophyseal portal system originates in:
a. Anterior hypothalamus
b. Posterior hypothalamus
c. Lateral hypothalamus
d. Medial hypothalamus
Ans: D
Q. If V/Q has increased, which of the following conditions can cause this?
a. Tuberculosis

b. Pure oxygen
c. Shunt
d. None of the above
Ans: D

Q. Spinal cord thick segments:
a. C5, T1
b. C6, C7, C8
c. T1, T12
d. S1, S2, S3, S4
Ans: A

Q. The xiphoid process corresponds to:
a. Body of the T11vertebrae
b. Body of the T10 vertebrae
c. Body of the T9 vertebrae
d. Body of the T8 vertebrae
Ans: C

Q. A policeman sends a person to you for medical exam. After examination, a diagnosis of opioid abuse is made. Which of the following is the first psychological sign that is seen in the patient?
a. Euphoria
b. Denial
c. Anti-social behavior
d. Grandeur
Ans: B

Q. Slow writhing pain is carried by:
a. A Beta
b. Type C fibers
Ans: B

Q. NSAID of choice in a lactating mother:
a. Ibuprofen
b. Ketorolac
c. Paracetamol
d. Pethidine
Ans: A

Q. A patient of peptic ulcer presents with molar pain; analgesic of choice would be:
a. Aspirin
b. Ibuprofen
c. Diclofenac
d. Acetaminophen
Ans: D

Q. Superior cardiac plexus gets its supply from:
a. Right vagus
b. Left vagus
c. Recurrent laryngeal nerve
d. Axillary nerve
Ans: B

Q. Infra orbital artery is a branch of:
a. Auricotemuporal
b. Maxillary
c. Facial
d. Spinal
Ans: B

Q. Postganglionic sympathetic adrenergic fibers supply all except:
a. Sweat glands
b. Adrenals
c. Heart
d. Muscle
Ans: A

Q. The fibers found in substantia gelatinosa are:
a. Alpha
b. Beta
c. Type C
Ans: C

Q. A patient comes to you with acute exacerbation of asthma, immediate management would be:
a. Inhalational salbutamol
b. IV theophylline
c. Adrenaline
d. Mast cell stabilizers
e. IV steroids
Ans: A

Q. Circumduction is:
a. Flexion and extension
b. Flexion, extension, medial and lateral rotation
c. Extension and Medial Rotation
d. Lateral rotation and Extension
Ans: B

Q. A correlation study involving surgical table and heat loss from a patient lying on it:
a. Chi square
b. Analog
c. Regression Analysis
d. Student t-test
e. Anova
Ans: C

Q. A doctor with good communication skills would be best in:
a. Confidence
b. Assertive tone

c. Active listening
d. GPE only
Ans: C

Q. A middle-aged diabetic husband complains of "problems in bed" with wife… a good doctor's first response should be:
a. "we'll do labs and check"
b. "what do you mean by 'problems in bed'?"
c. "it's a common issue in DM, don't worry"
d. "I'll prescribe you sildenafil right away"
Ans: B

Q. Vitamin whose demand increases with increased protein intake:
a. Pyridoxine
b. Riboflavin
c. Vitamin A
d. Vitamin E
Ans: B (Thiamine for carbohydrates, Biotin for fats and riboflavin for proteins.)

Q. Niacin deficiency causes:
a. Night blindness
b. Pellagra
c. Headache
d. Rickets
Ans: B

(Niacin (vit. B3) deficiency causes Pellagra. The **' 3** Ds': **D**iarrhea, **D**ermatitis & **D**ementia is a good mnemonic by USMLE First Aid)

Q. Pernicious anemia is due to:
a. Stomach removal
b. Autoimmunity
c. Decrease Ferritin
d. Increase HB
Ans: B

Q. The food that decreases risk of cancer the most:
a. Cheese
b. Smoked meat
c. Oranges
d. Mango
Ans: C

Q. Lipoprotein with the most cholesterol content:
a. LDL
b. VLDL
c. HDL
d. Chylomicron
Ans: A (LDL has the highest percentage of cholesterol (about 50%). It has been named the "bad cholesterol". A mnemonic for memorizing the order of increase in **density** of lipoproteins is 'CVIL HDL'.
C hylomicron (8 percent * **cholesterol** *)
V LDL (22%),
I DL (29%),
L DL (50%),
HDL (30%))

Q. Lipoprotein which serves as the main cholesterol/energy source for cells:
a. LDL
b. IDL
c. HDL
d. Chylomicron
e. VLDL
Ans: A

Q. Burning 1 gram of fat releases how many kCal:
a. 12
b. 9
c. 4
d. 1
Ans: B (Nine kCal or nine food calories). While carbs and proteins both give 4Kcal/gm

Q. Gluconeogenesis is limited by the availability of:
a. Oxalic acids
b. FFAs
c. Amino acids
d. Acetic acids
Ans: B

Only odd chain fatty acids are capable of producing glucose through gluconeogenesis. USMLE FA 2019) Gluconeogenesis is production of glucose from non-carbohydrate moieties. 90 percent of gluconeo is done by Glucogenic amino acids. Lactate glycerol alanine and glutamine.

Q. The process by which free sugar is converted to glycogen is:
a. Glycolysis
b. Gluconeogenesis
c. Glycogenesis
d. Glycogenolysis
Ans: C ('glycogen-' for glycogen, 'genesis' for creation, thus glycogenesis)

Q. Total mass of iron in human female is:
a. 2.5g
b. 3g
c. 3.5g
d. 4 g

e. 4.5g
Ans: A
Q. Alveolar ventilation numerical:
a. Respiratory rate = 18,
b. Tidal volume= 350mL,
c. Dead space =100mL
d. A = 4.5L
Ans: A (Alveolar Ventilation = RR × [Tidal volume – dead space)
Q. Lungs remain expanded in thoracic cavity due to:
a. Positive transpulmonary pressure
b. Negative pleural pressure
c. Positive intra-alveolar pressure
d. Decreased surface tension in alveoli
Ans: B
Q. Uppermost part of lung has:
a. Shunting
b. Dead spacing
c. High perfusion
d. High ventilation
Ans: B
Q. Case of COPD showing a PO_2 decrease, in which type of hypoxia does this happen?
a. Hypoxic hypoxia
b. Anemic h.
c. Stagnant h.
d. Histotoxic h.
Ans: A
Q. A soldier was ordered to climb till Siachen within 2 days of his arrival from Karachi; on reaching the summit he started having dyspnea, what caused it?
a. Pedal edema
b. Pulmonary edema
c. Orbital edema
d. Mucosal edema
Ans B
Q. S1 happens during:
a. Isovolumetric contraction
b. Ejection phase
c. Isovolumetric relaxation
Ans: A (and S2 during iso relaxation)
Q. Reason of splitting of S2 during deep inspiration:
a. Pulm valve closes before aortic valve,
b. Aortic valve closes before pulm. Valve
c. Aotirc valve open before before pulm valve
Ans: B
Q. During exercise, blood flow in skeletal muscles is increased mainly by:
a. Increased stroke volume
b. Increased HR
c. Increased local metabolites
d. Increase TPR
Ans: C
Q. Most important determinant of MAP is:
a. SV
b. CO and TPR
c. Arterial capacitance
d. Venous capacitance
e. CO and arterial capacitance
Ans: B (Depends on CO and TPR SO B here)
Q. Well trained athlete at rest will have:
a. High BR
b. High stroke volume
c. High TPR
d. High CO
Ans: B
Q. If BP is checked by invasive method from dorsalis pedis artery, how would it differ from the BP checked from radial artery?
a. Systolic BP is lower
b. Pulse pressure is higher
c. Both systolic and diastolic BP lower
d. Systolic BP is higher
Ans: B
Q. In a patient 8% blood is lost slowly without change in arterial pressure; most of the blood will be lost from which vascular compartment?
a. Small and medium size veins
b. Large veins
c. Capillaries
d. Arteries
Ans: A
Q. The conduction system of heart is made up of specialized:
a. Nerves
b. Cardiac myocytes
c. Metabolites
d. Minerals
Ans: B
Q. Ductus arteriosus closes:

a. Just after birth.
b. Somewhere in intrauterine life
c. Somewhere in intrauterine life

Ans: A

Q. Acidosis/Alkalosis scenario: pH=7.30, bicarb= 30, PCO2=50:

a. Metabolic acidosis
b. Respiratory acidosis with compensation
c. Metabolic alkalosis
d. Respiratory alkalosis

Ans: B

Q. A patient is diagnosed with nephrotic syndrome and has generalized edema, what's causing it?

a. Decreased plasma oncotic pressure
b. Increased plasma oncotic pressure
c. Increased interstitial fluid osmotic pressure
d. Increased capillary hydrostatic pressure

Ans: A

Q. Membrane potential goes from - 70 till +35, this is due to:

a. K+ outflux
b. Na+ influx,
c. Cl- outflux
d H outflex

Ans: B

Q. Repolarization is due to:

a. K+ outflux
b. Na-K pump
c. Cl- influx
d. H outflex

Ans: A

Q. Severe Hyperkalemia is caused due to:

a. Flat T waves
b. Increased insulin
c. Decreased HCO_3
d. Increased HCO_3

Ans: C (C seems right here as decreased HCo_3 means acidosis and acidosis leads to hyperkalemia as body shifts hydrogen ions inside on expense of K+ ions outside).

Q. RBCs are immersed in a hypertonic urea solution; RBC cell membrane is freely permeable to urea, what will happen?

a. RBCs will hemolyze
b. RBCs shrink and then swell back to original size
c. RBCs remain the same size (no change)
d. RBC changes itno spherocytes

Ans: B

Q. A patient has urine osmolality = 900 mOsm/L, plasma osmolality = 230 mOsm/L, his ECF vol is raised, what's his problem?

a. Addisons disease
b. Dehydration
c. Diabetes insipidus
d SIADH

Ans: D (Learn the difference between SIADH and dehydration)

Q. Concentrated urine is produced in a person and he feels thirsty, this is due to:

a. Water deprivation
b. Diabetes insipidus
c. Water intoxication
d Increase Na

Ans: A > D

Q. ADH act through which of the following?

a. Gene
b. IP3
c. GMP
d. AMP

Ans: B (It can also be asked in this way: Vasoconstriction by IP3 mechanism is caused by = ADH)

Q. Renal medulla will become more concentrated if:

a. Flow is increased in LOH
b. Blood flow is decreased in Vasa Recta
c. Water permeability is increased in Collecting Duct
d. Water permeability is altered in PCT

Ans: B

Q. Loop of Henle:

a. Not cordinated with Vasa recta
b. Countercurrent exchange
c. Countercurrent multiplier

Ans: C

Q. A patient frequently comes to emergency with dehydration and electrolyte imbalances, says that he had cancer of a portion of GIT which was resected and he doesn't remember its name:

a. Jejunum
b. Ileum

c. Colon
d. Stomach
Ans: B

Q. Primordial germ cells originate from:
a. Neural tube
b. Neural crest cells
c. Ectoderm
d. Mesoderm
e. Endoderm
Ans: C

Q. Name of Middle Meningeal artery's branch which passes deep to the pterion in the temporal region and in case of blunt trauma, can cause epidural hemorrhage:
a. Posterior cerebral artery
b. Anterior Meningeal artery
(It is aka 'Anterior branch' of middle meningeal artery)
Ans: B

Q. Name of nerve that supplies the scalp muscles:
a. Facial (CN 7)
b. Posterior auricular
c. Temporal
d. CN 2
Ans: A (Facial nerve gives motor supply to all facial muscles including the occipitofrontalis (the scalp and forehead muscle)

Q. Choroidal artery is a branch of:
a. Basilar artery
b. Internal Carotid artery
c. PCA
d. Vertebral artery
e. ACA
Ans: B

Q. True about Recurrent laryngeal nerve:
a. Provides sensory supply below vocal cords
b. Supplies epiglottis
c. Supplies inf constrictor
Ans: A

Q. During thyroidectomy, the artery related to Recurrent Laryngeal nerve that the surgeon cautiously ligates is:
a. Superior thyroid
b. Inferior thyroid
c. SMA
d. IMA
Ans: B

Q. Prevertebral layer of deep cervical fascia forms floor of:
a. Muscular triangle
b. Posterior triangle
c. Submental triangle
d. Carotid triangle
e. Posterior Cervical triangle
Ans: B

Q. Which of the following is a branch of thyrocervical trunk?
a. Superior thyroid artery
b. Inferior thyroid artery
c. Celiac artery
d. Inferior thyroid artery
Ans: B

Q. Organ/structure that remains the same size from birth till adulthood:
a. Internal ear
b. Thymus
c. Middle ear
d. Spleen
Ans: A

Q. Muscle which increases vertical length of the Rib cage:
a. External intercostals
b. Rectus Abdominus
c. Diaphragm
d. Scalene muscles
e. Sternocleidomastoid
Ans: C

Q. Right lung has:
a. One fissure only
b. Four pulmonary veins
c. 4 lobes
d. Direct association with azygous vein
Ans: D

Q. Which of the following best characterises a bronchopulmonary segment?
a. Its supplied by celiac artery
b. Its the functional unit of lung
c. Its not important part.
Ans: B

Q. A patient gets dyspneic on lying supine, what's causing this?
a. Multinodular goitre
b. Retrosternal goitre
c. Thyroid nodule
Ans: B

Q. Brachiocephalic vein tributaries:
a. Internal jugular and subclavian
b. External jugular and subclavian
c. Internal jugular and SVC
d. Subclavian and SVC
Ans: A

Q. Brachiocephalic artery branches:
a. Internal Jugular only
b. External Jugular only
c. Right common carotid and Right subclavian
Ans: C

Q. Characteristic feature of Right ventricle is:
a. Pulmonary trunk originates from it
b. Contains papillary muscles
c. Contains Purkinje fibers
d. Contain smooth muscles
Ans: A (This was the only feature distinguishing it from the left ventricle)

Q. Diaphragmatic openings
MCQ: Aortic opening is at the level of vertebra:
a. T12
b. T10
c. T8
d. C7
Ans: A

Q. Dermatome that supplies the umbilical area:
a. T1
b. T2
c. T5
d. T10
Ans: D
Dermatome MCQ, above clavicle (C4), below clavicle (C5), nipples (T4), umbilicus (T10).

Q. Name of the ligament that runs from Ant. sup. iliac spine to pubic tubercle:
a. Broad ligament
b. Cooper's ligament
c. Inguinal ligament
Ans: C
(The famous Inguinal 'ligament' is actually the reflection of rectus abdominis muscle aponeurosis)

Q. Right and left kidneys can be best differentiated from each other by:
a. Difference in size and weight
b. Arrangement of structures at their hila
c. Shape of poles
d. Colour
Ans: B

Q. Vertebral bodies are limited by which ligament?
a. Interspinous
b. Lig. Flavus
c. Ant. Spinal
d. Post. Spinal
e. Intertransverse
Ans: D
(Vertebral bodies have post and ant spinal ligaments. Post spinal best here).

Q. Vertebra that forms the body of the vertebra above:
a. C3
b. C2
c. T1
d. C1
e. L1
Ans: B (True form body of atlas. Atlas lacks body and spine).

Q. Spinal cord extent in a newborn is till:
a. T12
b. L1
c. L2
d. L3
e. L4
Ans: D

Q. Filum terminale limit, the vertebral level where pia / arachnoid mater terminates:
a. S2
b. S4
c. S1
d. S3
Ans: A

Q. 11 yr old girl gets an X-ray done for bone age determination; secondary ossification centre that will appear last is in:
a. Medial epicondyle of humerus
b. Lateral epicondyle of humerus
c. Lateral epicondyle of ulna
d. Lateral epicondyle of radius
Ans: B (Lateral epicondyle ossifies last)

Q. Organelle that is capable of self replication:
a. Peroxisome
b. Lysosome
c. RER

d. Mitochondrion
e. Nucleus
Ans: D

Q. The organelle that packs proteins is:
a. Golgi apparatus
b. SER
c. Nucleus
d. Ribosome
e. Nucleolus
Ans: A

Q. True about the nuclear envelop:
a. Has pores for unidirectional transport
b. Chromatin is continuous with cytoplasm
c. Cover cytosol
Ans: A

Q. To which structures in the cell do desmosomes bind?
a. Microfilaments
b. Intermediate filaments
c. Cytosol
Ans: B

Q. The buccal mucosa is lined by numerous, tiny, dispersed salivary glands, in which layer are they located?
a. Lamina propria
b. Epithelium
c. Submucosa
d. Orbicularis oris
Ans: C

Q. The most important pathology required for thrombosis is:
a. Local metabolites
b. Endothelial injury
c. Increase Blood flow
d. Cortisol
Ans: B

Q. Gallstones can lead to gallbladder carcinoma because they cause:
a. Inc. Blood flow
b. Acute injury
c. Chronic irritation
d. Dec blood flow
Ans: C

Q. A patient's sputum shows eosinophils; he most likely has:
a. Parasitosis
b. COPD
c. RDS
d. Asthma
Ans: D

Q. Most common cause of fat necrosis is:
a. Traumatic
b. Enzymatic
c. Nueral
d. Hormonal
Ans: A

Q. Max tensile strength of wound develops at:
a. Indefinite period
b. First week
c. 3 months
d. 2 months
Ans: C

Q. Diagnostic test at microscopy for malignancy:
a. ASO
b. Increased N/C ratio of cells
c. Gram Stain
d. ERCP
Ans: B

Q. Most radiosensitive tissue is:
a. Muscle
b. Hematopoietic
c. Brain
d. Adipose tissue
Ans: B

83. Juvenile polyp is also known as:
a. Nasal polyp
b. Anti tumor polyp
c. Hamartomatous polyp
Ans: C

84. Which one of the following genetic disorder is autosomal dominant?
a. Cystic Fibrosis
b. Thalassemia
c. Duchenne Muscular Dystrophy
d. Hereditary Spherocytosis
Ans: D

85. Bone remodelling is done primarily by:
a. Osteoclasts
b. Osteocytes
c. Osteoblasts and osteoclasts
d. Osteoblasts
Ans: C

86. Bacterial virulence depends on:
a. Dose of toxin
b. Number/dose of bacteria
c. Number of days
d. Age
Ans: A

88. The easiest method to demonstrate N. gonorrhoeae gonococci in an exudate sample is by:
a. Gram staining
b. ZN staining
c. Bacterial culture
d. ASO titer
Ans: A

89. Which neoplasm can be caused by EBV?
a. Kaposi sarcoma
b. Cervical Ca
c. HCC
d. Burkitt's lymphoma
e. Leukemia
Ans: D

90. The most active anti tumour WBC is:
a. CD 8 + T lymphocytes
b. Neutrophils
c. NK cells
d. B cells
Ans: C

91. Leukocytes are activated by:
a. IL2
b. Cytokines and TNF
c. Arachidonic acid derivatives
IL5
Ans: B

92. Acute viral infection raises levels of:
a. Neutrophils
b. Eosinophils
c. Monocytes
d. Lymphocytes
Ans: D

93. In secondary immunocompromisation, what's the most probable?
a. Recurrecurent headache
b. Blindness
c. Repetitive opportunistic infections
d. Nasal polyp formation
Ans: C

94. Hep B is most transmissible when?
a. HB s Ag + HB e Ag - anti HB e Ab +
b. HBsAg - HBeAg - anti HB e Ab +
c. Anti HB s Ab + HBeAg - anti HB e Ab +
d. Anti HB s Ab + HBeAg - anti HB e Ab -
e. HBsAg + HBeAg + anti HBs Ab -
Ans: E

95. A man is picked out anti-HCV Ab positive, LFTs were normal, the next best investigation would be:
a. Repeat anti-HCV Ab
b. Repeat LFTs
c. PCR
d. Autoimmune profile
e. Abdominal USG
Ans: A

96. Comparison of CSF with another fluid is called:
a. Baricity
b. Specific gravity
c. Absolute gravity
Ans: A

97. CSF is different from plasma in that it has:
a. Higher glucose
b. Higher Na^+ ions
c. Lower H^+ ions
d. Lower protein
e. Lower Cl^- ions
Ans: D (Lower glucose lower proteins equal Na and High chloride. Same osmolarity).

98. Which one of the following is the worst blood transfusion mismatch?
a. AB + donor and A – recipient.
b. O+ donor and A – recipient.
c. O-ve donor and B + recipient.
d. O–ve donor to AB +ve recipient.
Ans: A

99. Which of the following is correct about ESR?
a. Dec. Fibrinogen lowers it
b. Dec. Albumin raises it
c. Important in itching
d. For Headache marker
Ans: B
Remember Albumin inversely proportional to ESR and fibrinogen directly proportional. Inc albumin equals decrease ESR and inc fibrinogen increase ESR.

100. Best monitoring tool after administration of heparin:
a. PT
b. BT
c. INR
d. aPTT
e. Clotting Time
Ans: D

101. Platelets are aggregated by which stimulus:
a. Thromboxane A2
b. Prostaglandin I2
c. PGE2
d. IL2
Ans: A

102. Which of the following is a chemotactic factor?
a. IL2
b. IL1
c. LTB4
d. C5b
Ans: C

103. Fixed DILATED pupil on one side, where is the lesion?
a. Oculomotor nerve (CN 3)
b. CN 2
c. CN 5
d. CN7
Ans: A

104. Patient has partial ptosis and miosis on one side, what's his problem?
a. Oculomotor palsy
b. Horner's
c. Argyll-Robertson pupil
d. Stroke (UMN lesion)
Ans: B

105. Stroke scenario in a patient, becomes aphasic, has right hand weakness and left facial weakness. Cerebral artery involved is:
a. Left MCA
b. Right MCA
c. Vertebral artery
d. Spinal artery
Ans: A

106. Name of CN that originates from Anterolateral Pons:
a. Abducent (CN 6)
b. Facial (CN 7)
c. Trigeminal (CN 5)
d. Vestibulocochlear (CN 8)
e. Glossopharyngeal (CN 9)
Ans: C

107. Lentiform nucleus is:
a. Putamen + globus pallidus
b. Putamen + caudate nucleus
c. Substantia nigra
d. Subthalamic nuclei
Ans: A

108. Hypophyseal portal system is connected to:
a. Adenohypophysis
b. Neurohypophysis
c. Pars intermedia
d. Subthalamus
Ans: A

109. Mechanisms used by Anterior hypothalamus:
a. Anorexia
b. Apathy
c. Sweating and vasodilation
d. Heating
Ans: C

110. Most rapidly adapting receptor:
a. Muscle spindle
b. Meissner's corpuscle
c. Ruffini
d. Merkel
Ans: B

111. Sensory receptor that detects steady pressure:
a. Ruffini
b. Pacinian corpuscle
c. Merkel's disc
d. Meissner's
Ans: A

112. UMNs when fire towards muscle fibres, fire:
a. Both gamma and Alpha
b. Either one
c. Delta fibers
d. Beta fibers
Ans: A

113. Spinal cord hemisection happened in a patient, which of the following sensations would be lost contralaterally below the lesion?
a. Proprioception
b. Vibration
c. Pain
d. Fine touch
Ans: C

114. Sympathetic cholinergic endings act on:
a. Skeletal muscle
b. Ciliary muscle
c. Intestinal SM
d. Cardiac myocyte

e. Sweat glands
Ans: E

115. Drug of choice for Pregnancy (5 months) thyrotoxicosis:
a. Propylthiouracil
b. Radioiodine
c. Methimazole
d. Bisphosphonate
Ans C (1st trimester propylthiouracil after that methamizole)

116. Hormone whose level remains normal during pregnancy:
a. PTH
b. GH
c. Cortisol
d. Estrogen
e. ADH
Ans: B

117. Clotting factor that gets reduced in pregnancy:
a. Factor 10
b. Factor 8
c. Factor 7
d. Factor 11
e. Factor 2
Ans: E (Factor 2, AT3, Protein S)

118. Best tool to diagnose congenital disease in fetus:
a. Chorionic villous sampling
b. Amniotic fluid sampling
c. Ultrasound
d. Fetal blood sampling
e. Genotyping
Ans: A (If before 14 weeks then ultrasound).

119. A middle-aged diabetic on anti-diabetics is worried about his recent weight LOSS, most likely drug with this side effect is:
a. Metformin
b. Glimepiride
c. Acarbose
d. Rosiglitazone
e. Vitagliptin
Ans: A

120. An obese lady with chronic DM has gastroparesis, which drug is best for her:
a. Antacids
b. Metoclopramide
c. Motilium
d. ALOH
Ans: B

121. Name of the longest acting insulin:
a. Lente
b. Semilente
c. Ultralente
d. Glargine
e. NPH
Ans: C

122. First recombinant drug approved by FDA:
a. Bovine insulin
b. Porcine insulin
c. Human Growth Hormone
d. Interferon
e. Human insulin
Ans: E

123. A patient is diabetic and hypertensive both, which antihypertensive is best for him:
a. Furosemide
b. Lisinopril
c. Amlodipine
d. Hydrochlorothiazide
e. Propranolol
Ans: B

124. A lady taking drugs gets Hyperchloremic Metabolic Acidosis, which of the following is most likely to cause this:
a. Acetazolamide for glaucoma
b. Furosemide for severe HTN
c. Captopril for HTN
d. Metformin for DM
Ans: A

125. A middle-aged man has severe HTN, BP 200/150 mmHg, best drug for his management:
a. Furosemide
b. Lisinopril
c. Captopril
d. Losartan
Ans: C

132. Antibiotic that is most likely to cause Pseudomembranous colitis:
a. Ampicillin
b. Ciprofloxacin
c. Clindamycin
d. Gentamicin
e. Streptomycin

Ans: **C** (clostridium difficile)

133. Antibiotic that is responsible for 'Red Man Syndrome':

a. Vancomycin
b. Ampicillin
c. Penicillin
d. Meronum

Ans: **A**

134. Drug of choice in UTI caused by P. aeruginosa:

a. Co-trimoxazole
b. Ceftriaxone
c. Ciprofloxacin
d. Ampicillin

Ans: **C**

135. A gardener sprays plants with insecticide, gets organophosphate poisoning and the best treatment for him would be:

a. Adrenaline
b. Atropine
c. Ach
d. Dopamine

Ans: **B**

136. The most potent bronchodilator is:

a. Isoproterenol
b. Albuterol
c. Ephedrine
d. Terbutaline

Ans: **B**

147. A middle-aged man gets his humerus fractured by minor trauma (his arm got hit by the closing elevator doors). Which drug could be the cause?

a. Diclofenac
b. Aspirin
c. Corticosteroids
d. Naproxen

Ans: **C**

148. Chronic estrogen use by a woman is most likely to cause:

a. MI
b. Breast cancer
c. DVT
d. Ovarian cancer
e. Endometrial cancer

Ans: **E**

149. Warfarin affects the synthesis of which clotting factors:

a. Factors 2, 7, 9, 10
b. Antithrombin
c. Factor X
d. Factor leiden

Ans: **A**

150. Role of somatostatin in a pancreatic fistula patient:

a. Increase GH
b. Increase secretions
c. Decreases secretions
d. Increase Histamine

Ans: **C**

151. The drug that prevents atherosclerosis progression is:

a. Domperdone
b. Atorvastatin
c. Aspirin
d. Minoxidil

Ans: **B**

152. Drug that causes paraesthesia and nausea & vomiting:

a. Pyriznamide
b. Ethambutol
c. INH
d. Streptomycin

Ans: **C** (Remember Isoniazid for peripheral neuropathy in TB).

153. Which of the following drugs causes hypokalemia?

a. Spirinolactone
b. Antacids
c. Amiloride
d. K-Lyte

Ans: **B**

154. Reusable face masks are cleaned by:

a. Pyodine
b. Ethylene oxide
c. Lidocaine

Ans: **B**

160. Change of flow from laminar to turbulent is independent of:

a. Density
b. Viscosity
c. Length
d. Diameter
e. Velocity

Ans: **C**

161. Potency of inhalational anesthetic depends on its:

a. Lipid solubility
b. Blood gas solubility

c. Age
Ans: A

168. What causes severe hyperkalemia?
a. Succinylcholine given in immediate burns
b. Insulin
c. Loop diuretics
Ans: A

177. Necrosis in brain due to bacterial infection is:
a. Liquefactive Necrosis
b. Fat necrosis
c. Fibrinoid Necrosis
d. Cogulative Necrosis
Ans: A

178. What is the fluid of choice in paradoxical aciduria?
a. Normal saline (0.9% NaCl)
b. 5% dextrose
c. Ringer's lactate
d. Half normal saline (0.45% NaCl)
Ans: D (According to discussion in group its Ringer lactate for aciduria and N saline for paradoxical aciduria.

179. Best IV fluid that should be used for third Space Losses:
a. Half normal saline
b. Normal saline
c. Ringers lactate
d. 5% dextrose
e. Hypertonic saline
Ans: C

182. A patient presented to emergency with stab wound:
a. Increase BP
b. Decreased BP
c. Low pulse
d. Blindenss
Ans: B

183. Increased ICP causes which of the following:
a. HTN + tachycardia
b. HTN + bradycardia
c. Tachycardia + tachypnea
Ans: B (Cushing Reflex)

184. Saw tooth waves on ECG, 3:1 block, 250/min atrial rate, what is it?
a. A fib
b. Atrial flutter
c. VT
Ans: B

185. Best way to prevent iatrogenic infections in ICU is:
a. Wearing gloves
b. Frequent hand washing
c. Wearing a face mask
Ans: B

186. Amount of air to produce symptoms of air embolism?
a. 100cc
b. 10cc
c. 5cc
d. 50c
Ans: A

187. Nissle granules:
a. Axon hillock
b. SER
c. RER
d. Mitochondria
Ans: C

188. Alpha motor neurons are:
a. Myelinated
b. Form neuromusclar endplate
c. Are present in intrafusal fibres
Ans: A

190. Increase of which in case of obstructive lung disease?
a. Vital capacity
b. FRC
c. IRV
d. ERV
Ans: B

191. Complete sensations lost. Which of the following is affected?
a. Spinothlamic tract
b. Dorsal column lesion
c. Cortocospinal tract
d. Ventral spinal lesion
Ans: B (Remember Pain and temperature are lost contralateral and vibration propriocepton and two-point discrimination are lost in unilateral fashion in hemisection of spinal cord).

192. Max deviation to left of Hb dissociation curve:
a. Decrease 2 3 DBG
b. Increase ph
c. Hypocapnia
d. HBF
e. CO poisoning causes extreme left deviation
Ans: E

193. Ratio density of solution with density of water:
a. Viscosity
b. Specific gravity
c. Relative gravity
d. Baricity
Ans: B (its specific Gravity (density of a substance to density of given reference material (usually water) AKA Relative Density)

194. Drug for acenitobacter bominai:
a. Imipenim
b. Ceftraxone
c. Vancomycin
d. Penecillins
Also know:
SNAP
Sulphonamide – Nocardia
Actinimyces – Pencillin
Ans: A (Carbapenems are used).

195. Drug in gas gangrene:
a. Pencillin
b. Vanco
Ans: a (Penicillin is the drug of choice)

196. IV drug abuser with staph aureus infection:
a. Cloxacilin
b. Benzyl penicillin
Ans: A (There are one or two questions every time regarding drug of choice for microbes)

197. HR doubled, duration of cardiac cycle will be:
a. 0.2 sec
b. 0.1 sec
c. 0.4 sec
d. 0.9 sec
Ans: C
Explanation: Normal duration is 0.8 s if u double the heart rate cycle is approx. halved.

198. Internal opthalmoplegia:
a. CN 6
b. CN 3
c. CN 5
d. CN 4
Ans: B
Int ophthalmoplegia is involv of constrictor pupilae and iris only with sparing of EOM so CN3 here)

199. Calf muscle atropy + ankle muscle also weekness:
a. LMN lesion involving anterior horn cells
b. Upper motor neuron lesion
c. Local Trauma
Ans: A (Stem incomplete though muscle wasting is more prominent in LMN lesion.

200. Muscle weakness + edema:
a. Dermatomysiits
b. Marasamus
c. Polymyositis
d. Kawashikor disease
Ans: D

201. Lymphoid flow is decresed by:
a. Increase capillary oncotic pressure
b. Increase capillary hydrostatic pressure
c. Increase capillary permeability
d. Increase interstitial oncotic pressure
Ans: A

202. Drug to be given in some allergy with respiratory distress:
a. Oral steroid
b. Oral anti histamine
c. Oral antibiotic
d. Iv antibiotic
e. Iv steroid
Ans: E (Best should be Iv adrenaline or IM Adrenaline)

203. Bracheiocephalic vein:
a. Superior vena cava + internal jugular vein
b. Internal jugular and subclavian
c. IVC+ IJV
d. IJV+ Brachial vein
Ans: B

204. Beta blocker for angina which can be safely given in COPD pt:
a. Timolol
b. Sotalol
c. Nebivolol
d. Metoprolol
e. Pindolol
Ans: D (Remember B1 selective mostly start from A-M and Pinadolol and acebutalol are C/I in angina due to intrinsic sympathomimetic activity).

205. Which will stop 24 hours otherwise cause lactic acidosis (senerio like that)?
a. Insulin
b. Glimipride
c. Metformin
d. Sitagliptin
Ans: C

(Mcq always comes from Anti diabetics remember metformin first line for obese newly diagnosed DM-2 and for pregnancy always select insulin).

206. In hyperthyroid pt with tachycardia, what will you give?
a. Alpha blocers
b. Beta blocker
c. CCB
d. Losartan
Ans: B

207. Rt. middle cerebral artry damaged:
a. Aphasia
b. Left sided weakness
c. Right rided weakness
d. Right sided paralysis
Ans: B (Remember MCA for upper body weakness and ACA for lower body weakness as dominant hemisphere for speech is most commonly left hemisphere even in left handed so this option seems more correct)

208. Skin disinfection:
a. Water
b. Alcohol Chlorhexidine
c. Ethosuximide
d. Distilled water
Ans: B

209. Gum bleeding + ecymosis:
a. Vitamin E def
b. Vitamin A def
c. Vitamin C def
d. Vitamin A def
Ans: C

210. Neurotic lady PH 7.5 HCO_3 21 PCO was higher side 44?
a. Resp Acidosis
b. Resp alkalosis
c. Metabolic acidosis
d. Metabolic alkalosis
Ans: B

211. Surgeon operating surgery he saw blood is oosing close to Left coronary artery Damage of which vein?
a. Great Cardiac Vein
b. Small cardiac vein
c. Ant jugular vein
d. Pot jugular Vein
Ans: A

212. CNS mylein sheeth:
a. Oligodendrites
b. Schawn cells
c. Astrocytes
d. NK cells
Ans: A

213. 2/3 of lung volume increased by:
a. IIC muscle
b. EIC muscle
c. Diaphragm
d. Accessory
Ans: C

214. Lipids give:
a. 9kcal/g
b. 6kcal/g
c. 4kcal/g
Ans: A

215. Final processing of Protein metabolism and formation of glycoproteins occurs in:
a. Mitochondria
b. RER
c. Golgi bodies
d. SER
Ans: C (if just formation of glycoproteins asked not processing then go for RER)

216. Which route has greatest Bioavailability?
a. IM
b. IV
c. SC
d. PR
Ans: B

217. Uterus and breast regression after parturition:
a. C reactive protein
b. Lysosome
c. Peroxisome
d. Mitochondira
Ans: B

218. Median umbilicus ligament:
a. Fallopian tube
b. Uterus
c. Ovary
d. Urachus (Remnant of Urachus pls read embryo from reproductive portion of FA very high yield learn all the tables in it.
Ans: D

219. Drug of choice in sub arachnoid hemorrhage:
a. Nimodipine
b. Nifidinpe
c. Verapamil

d. Losartan
Ans: A
220. Death in food poisoning is by:
a. Botulinum
b. V.cholra
c. Pseudomonas
d. E.coli
Ans: A
221. Patient is suffering from fever and malaise for 10 days O/e deep cervical lymph nodes palpable in digastric area something:
a. Palatine tonsillitis (Jugulo digastric nodes)
b. Parotid (Auricular nodes)
c. Submendibular gland (drains in submandibular nodes)
Ans: A
222. Cardaic output divided by HR = Sv:
a. CO = HR + SV
b. CO = SV x H. rate
c. CO = SV – HR
Ans: B
223. Lateral ventricle ant part roof formed by:
a. Roof formed by Corpus Callosum
b. Medial wall by Septum pellucidum
c. Floor by caudate nucleus also has choroid plexus in floor.
Ans: A
224. A 20 years old boy with rheumatic valvular heart disease has been running a low grade fever for the last two weeks. In addition to a pansysotlic murmur, he is found to have splenomegaly and clubbing, the treatment should be:
A- Inj. Cefotaxime + Metronidazole
B- Inj. Ceftriaxone
C- Inj. Penicillin
D- Inj. Penicillin + Gentamicin
E- Inj. Ciprofloxacin
Ana: D
225. Metoclopramide:
a. Inhibit H2 secretions
b. Inhbit Gastric emptying
c. Inhbit Proton pump
d. Inc gastric emptying time and enhances competency of gastro esophageal junction.
Ans: D
226. Ondestron MOA Primarily:
a. Act on chemotriger zone
b. Inhibit Gastric secretions
c. Antagonist of 5HT-3 receptor
d. Inhibit gastric emptying
Ans: C
227. Increase of which in case of obstructive lung disease:
a. Vital capacity
b. FRC
c. IRV
d. ERV
Ans: B
228. Thirst increased by:
a. Angiotensin
b. Aldo
c. Renin
d. ACTH
Ans: A
229. In dehydration, there will be increase which of the following?
a. Inc. ADh
b. Inc. Aldo
c. Inc. Renin
d. Inc. GH
Ans: A
230. Patient having high bp about 200/100 and s creatinine 8 which is impaired?
a. Prox tubule
b. Macula dnsa
c. Glumeruls
d. JG cells
Ans: D
231. Major HCO_3 absortion from which part of kidney?
a. PCT
b. DCT
c. CT
d. Loop of Henle
Ans: A
Explanation: 40% HCO3 / NA reabsorption done from DCT part of nephron. 85-90 percent HCO3 and 60 percent sodium absorbed from PCT please read acid base physiology thoroughly from BRS and first aid.
232. Fisherman on sea food for 6 month having gum bled and ecchymosis due to def of:
a. B12
b. B6
c. Vit c
d. Vit d

Ans: **C** (True if asked about anemia then clic B12 due to diphylobothrium latum)

233. Phospholipid cardiolipin exclusively found in:
a. Cell membrane
b. RER mem
c. SER mem
d. Mitochondrial mem
e. Lysosomal
Ans: **D**

234. Women with fever for 10 days. Chest pain radiating to back. Rustling sound in lef side of sternum on auscultation. Diagnosis:
a. Myocarditis
b. Pericarditis
c. Pleura inflammation
d. Pericarditis
Ans: **B**

235. Slight respiratory alkalosis by:
a. Hyperventilation
b. Dec Temp
c. Increase BP
d. Increase HR
Ans: **A**

236. Pt with Increased PTH, LOW HB, ALP normal?
a. ARF
b. CRF
c. Macrocytic Anemia
d. RCC
Ans: **B** (CRF per do Qs the in CRF Hb is low Pth is raised Vit D is low)

237. German measls at 6 weeks in pregnant lady baby at risk of:
a. Septl heart defct
b. Cataract
c. Truncus artriosis
d. Conjuctivits
Ans: **B**

238. Spirnolactone mechanism:
a. Act on PCT
b. Acts on aldosterone receptors in DCT causing pharmacologic antagnosim. K sparing diuretic.
c. Act on Ascenidng LOH
Ans: **B**

239. Endolthelial injury:
a. Cushing triad
b. Virchows triad
c. Whipple traid
Ans: **B**

240. Neurogenic Shock reason:
a. Loss of vagal tone
b. Loss of vaso motor tone
c. Infection
d. Heart failure
Ans: **B**

241. Diphtheria toxin effect:
a. Heart
b. Pharynx
c. Kidney
d. Lungs
Ans: **A**

242. Purine derivative:
a. Oxalic acid
b. Lactic acid
c. Uric acid
d. Acetic acid
Ans: **C**

243. Circle of willis:
a. Celiac and SMA
b. Int carotid and basilar artery
c. Internal jugular and brachia artery
Ans: **B**

244. Occulocardiac reflex:
a. Afferent Ophthalmic division of trigeminal
b. Afferent trigeminal
c. Efferent Vagus
Ans: **A**

245. Cough reflex:
a. Facial
b. Optic
c. Vagus
d. Acceossory
Ans: **C**

Note: Stimulant in bronchi or trachea Irritant receptors start the reflex --- cough center --- efferent to Vagus Phrenic and Spinal Motor nerves to Expiratory Muscles. IX or X.

246. Epinephrine causes:
a. B2 effects
b. Alpha 2 effects
c. Predominant A1 effects, used in anaphylaxis
Ans: **C**

247. Gram positive cluster>>> DOC:
a. Eryhtromycin
b. Cipro

c. Linzolid
d. Cloxacillin
Ans: D
Staphylococuus are gram positive cocci and DOC is Cloaxacillin

248. About Fetal circulation:
a. Right heart less O_2 than left heart
b. Right heart more O_2 than left heart
c. Left heart more O_2 than Right heart
Ans: A

249. Food we take best described in terms of good constituents:
a. Nutrients
b. Protein
c. Viamins
d. Minarals
Ans: A

250. Elastic cartilage:
a. Epiglottis
b. Nasal septum
c. Trachea
Ans: A

251. BP 80/40, HR43, Salivation Organophosphate poisoning:
a. Adrenaline
b. Atropine
c. Anti Histamine
d. Steroids
Ans: B

252. Patient with multiple fractures, initial measure:
a. Oxygen
b. Fluid replacement
c. Packed RBC
d. Atropine
Ans: B

253. Dec venous return:
a. In expiration
b. In Inspiration
Ans: A

254. S3 heard in:
a. Slow filling of ventricles
b. Rapid filling of ventricles
c. Rapid filling of Atria
Ans: B

255. Biopsy from liver with chronic hepatitis C positive shows:
a. Mallory bodies
b. Fibrosis picture of Cirrhosis
c. Psamomma bodies
Ans: B

256. Young patient with HCV positive further advice:
a. Gram stains
b. ASO
c. PCR
d. AFB smear
Ans: C

257. ASA data:
a. Nominal
b. Histogram
c. Ordinal
Ans: C

258. U wave T wave inverted QT prolonged:
a. Hyperkalemia
b. Hypercalcemia
c. Hypokalemia
Ans: C
Please learn the ECG findings of Hypo and Hyperkalemia both.

259. Stony dull sound on Right 2nd - 4th intercostal space and cause of stony dull?
a. Thinking of perital pleura in 2-4 IC space
b. Thinking of viceral pleura
c. Fluid accumulation in pleural space
Ans: C

260. Staging of Cancer:
a. Size numbering
b. Differentiaion
c. Extent of invasion
Ans: C

261. In the past 10 days Pain in left sternal border radiating to back on auscultation rustling sound are heard. Where is inflammation?
a. Pleura
b. Pericardium
c. Myocardium
Ans: B

1. The infectivity of hepatitis B patient on serology is shown by …. Hbe antigen + and Hbe antibody neg.
2. Autosomal dominant inheritance pattern is of … Hereditary spherocytosis
3. Iron deficiency anemia investigation … Increase TIBC

4. Which drug is excreted from body with minimal change in its composition … Streptomycin
5. Rat bite fever is transmitted by … Streptobacillus moniliformis
6. First FDA approved recombinant protein used as drug …. Recominant insulin
7. Which is anticancer of these eatables … orange > apple > chocolate
8. Normal amount of iron in adult female options were 1g , 2g , 3g , 4g … 2g (Iron 800mg and calcium 1200mg)
9. Normal weight of prostate options were 13g, 30g , 18g , 25g …. 18g
10. Normal weight by water in 4 months old is 60%, 30% , 40% , 65 % ….. 65% (if option of 75% is present go for that)
11. Which organ remains same in size in adult and infant options were external ear , middle ear, ear ossicles , internal ear … Internal ear
12. Which nerve arises from anterolateral surface of pons … Trigeminal nerve
13. What is motor nerve supply of scalp muscles …. Facial nerve
14. Pain from duodenal ulcer is carried by … Greater splanchnic nerve
15. Dermatitis , dementia , diarrhea is caused by which deficiency … Niacin
16. Which is present in apoptosis … Myelin figures
17. What is microscopic feature of malignancy… Pleomorphism (invasion was not in option)
18. Rapidly adapting receptors … Touch receptors
19. Testes will drain into nodes … Retroperitoneal (paraaortic was not in option, if present prefer that)
20. Prostate carcinoma will drain into … Internal iliac lymph nodes
21. Pneumonia investigation … Sputum culture
22. Carbon monoxide poisoning type of hypoxia … Anemic hypoxia
23. SIADH feature … Hyponatremia
24. One more scenario of dec serum osmolarity and increase urine osmolarity …. SIADH
25. Numerous minor salivary glands are present in … Submucosa
26. Peutz jehgers syndrome type of polyps… Hamartomatous polyp
27. After resection of colon carcinoma for follow up which level … CEA level
28. One more scenario of colon Ca … CEA level
29. PaO2 will be reduced in with normal gradient … High altitude
30. Intrinsic factor is secreted by … Gastric fundus
31. Which cells secrete intrinsic factor … Parietal cells
32. Sensory nerve supply of back of head at occiput … Greater occipital nerve
33. At pterion which branch given … anterior branch of middle meningeal artery
34. Which directly drains into superior vena cava … Azygous vein
35. The right bundle branch is supplied by… left coronary artery
36. The posterior one third of interventricular septum is supplied by …Posterior interventricular descending artery
37. The circumflex artery supplies … left atrium and left ventricle
38. Which directly empties into right atrium of heart … anterior cardiac vein
39. Major venous drainage of heart is into….coronary sinus
40. First heart sound is present in … isovolumetric contraction
41. Cyanotic heart disease …tetralogy of fallot
42. Which is most commonly present along with PDA … Atrial septal defect
43. Which vessel at risk of damage in c sec …. Uterine artery

44. Which vessel at risk of damage in oophorectomy … ovarian artery
45. Relation was asked ureter passes in front of … Common iliac artery
46. Relation of pancreas on anterior surface at head region … lesser sac
47. Brochopulmonary segments are … functional units of lung
48. Which crosses infront of abdominal aorta … Left renal vein
49. Pancreatica magna artery is branch of … splenic artery
50. Appendicular artery is branch of … ileocolic artery
51. What is nerve supply of internal urethral sphincter … splanchnic nerves
52. If membranous urethra ruptured urine will go to … deep perineal pouch
53. Gastroesophageal junction is present at .. T11
54. Cuboid articulates with … fourth and fifth metatarsals
55. Multiple fractures , blue sclera .. Osteogenesis imperfecta
56. Internal spermatic fascia is derived from … fascia transversalis
57. Deep inguinal ring is in the … fascia transversalis
58. The muscle with only one nerve supply … Diaphragm
59. Immature T cells are present in … deep paracortex
60. HLA B27 … ankylosing spondylitis
61. Asbestosis affects … lower lobes
62. One scenario of asthma eosinophilia my diagnosis was churg straus syndrome investigation asked … Ig E levels
63. Apoptosis activated by … Caspases
64. Corticosteroid excess causes … lymphopenia
65. Ileum resection causes … vit B12 deficiency
66. All investigations normal patient has mild jaundice … Gillbert syndrome
67. One scenario in which nerve supply of knee jerk was asked … L3 and L4
68. Germ cells are derived from … yolk sac endoderm (if option of ectoderm present, prefer that)
69. Insulin given from outside it causes …hypokalemia
70. Renin is secreted by …JG cells
71. Regarding bladder vessels run in peritoneum … Dorsolateral
72. Scenario of haemorrhage maximum blood loss will be from … veins
73. One more question of portal hypertension inferior vena cava is blocked something like that
74. Aorta opening in diaphragm .. T12
75. Appendicitis pain around umbilicus T10 dermatome …sensory supply
76. Excessive yawning muscle damaged … lateral pterygoid
77. How germs spread in hospital can be minimized best method … excessive hand washing
78. Which of the following is not example of artificial active immunity options were BCG , polio live vaccine , MMR, typhoid vaccine, antibodies in serum …. Antibodies in serum
79. ITP scenario what will be immediate management … steroids > give IV immunoglobulin
80. Serotonin is secreted by … enterochromaffin like cells
81. Patient is normal otherwise on serology HCV viral marker positive what is next step … PCR
82. EBV associated test … Monospot test
83. One more scenario of EBV … lymphoproliferative disease
84. Relation between dependent and independent variables … Regression analysis
85. Regarding good ethics of doctor … active listening
86. Person taking protein in diet must also take … Riboflavin
87. Person taking carbohydrates in diet must also take … Vit B1 thiamine

88. Maximum triglycerides present in … chylomicrons
89. Maximum lipoprotein present in … LDL
90. Portal vein is formed behind … neck of pancreas
91. After hemorrhage in patient fluid was given intravenously after 5 min where will be fluid given will be present now … arteries, veins, capillaries, aorta = veins

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Pathology – 2018

Q. Most important opsosin for combating acute infection:
A- Fc portion of IgG (C3b)
B- Fab portion of IgG (C3b)
C- LAF
D- IL6
E- LFA 1
Ans: A

Q. In Caucasians the percentage of blood group o in a population is:
A- 30%
B- 47%
C- 41%
D- 54%
Ans: B

Q. GFR increases with increases in:
A: Afferent arteriolar dilatation
B: Plasma colloid osmotic pressure
C: Interstitial fluid pressure
D: Interstitial fluid colloid osmotic pressure
Ans: A
Explanation:
Increase GFR due to
Afferent arteriole diltion
Efferent arteriole constriction
Decrease plasma proteins
Decrease GFR due to
Afferent arteriole Constriction
Efferent arteriole dilation
Increase plasma proteins
Ureter constriction

Q. A diabetic patient has unhealing ulcer on the foot what is correct:
A- Angiopathy
B- Neuropathy
C- Poor sugar control
D- Neuropathy and angiopathy
Ans: ?

Q. A patient present with anemia wrist drop constipation and peripheral neuropathy. On peripheral film characteristic basophilic stippling is seen. It is caused by:
A- Organophosphate poisoning
B- Arsenic poisoning
C- Lead poisoning
D- Aspirin poisoning
Ans: C

Q. Associated with rock crusher?
A- Anthracosis
B- Asbestosis
C- Silicosis
Ans: C

Q. Farmer's disease cause by:
A- Grain dust
B- Inorganic Dust
C- Silicon
D- Asbestose
Ans: A

Q. Child with periorbital edema and generalized edema due to:
A- Hypoalbuminemia
B- Hyperalbuminemia
C- Increase Salt retention
D- Decrease Salt retention
Ans: A

Q. Most common cause of nasopharyngeal carcinoma is:
A- CMV
B- EBV
C- HPV
D- HSV
E- Adenovirus
Ans: B

Explanation:
Nasopharyngeal CA – EBV
Oropharyngeal CA – HPV
Lung CA – CMV

Q. A pregnant female presented to OPD with 104 fever for last 4 days. No history of taking any drugs.. After 12 h she presented with cola colored urine. What is the cause?
A- G6PD
B- Black Water fever
C- Drug induced jaundice
D- Paroxysmal nocturnal hemoglobinuria
E- Hemaolytic yremic syndrome
Ans: B

Q. Growth hormone stimulated by:
A- Exercise
B- Diet
C- Hypoglycaemia
D- REM
E- Catecholamines
Ans: C (Guyton + Ganon)

Explanation:
Hypoglycemia >Exercise >NREM

Q. Which one is tumour suppressor/DNA repair gene?
A- BCL2
B- BCLX
C- P53
D- KRAS
Ans: C

Q. Histoplasmosis most commonly involved organ system:
A- Renal
B- CVS
C- Respiratory
D- Reticuloendothelial
Ans: D

Q. A Patient presented with Cough, coryza, conjunctivitis and koplik spots. Most like organisnm responsible for this clinical presentation is which among these?
A- Paramyxo Virus
B- Picarna
C- Polyoma virus
D- Orthomyovirus
E- Adeno
Ans: A (Measles)

Explanation:
Paramyxo Viruses
Measles
Parainfluenza
Mumpss
RSV
Orthomyxo Virus
Influenza Virus

Q. 45 yr female patient presented with hirsutism on the body and is shy to show her hands to the physician. What's the cause?
a. Adrenal tumor
b. Congenital adrenal hyperplasia
c. Polycystic Ovaries
d. Drug induced
Ans: C

But if asked:

Q. Female with obesity, hirsutism and increased BP:
A. Hyperaldosternism
B. Polycystic kidney disease
C. Polycystic ovary pattern
D. Conn syndrome
E. Androgen hypersensitivity

Ans: A

Q. Which of the following is the cause of Gastric lymphoma in a patient taking long term Antacids for stomach pain?

A- Atrophic gastritis
B- Autoimmune Gastritis
C- H.Pylori infection
D- Hypertrophic gastritis
E- EBV infection

Ans: C

Q. Which of Following is X linked recessive and associated with defect in dystrophin gene?

A- Duchene muscular dystrophy
B- Dystrophic myotonic dystrophy
C- Marfan syndrome
D- Cystic fibrosis
E- Glycogen storage disease

Ans: A

Q. HIV confirmatory test:

A. Western blot
B. Most confirmatory enzyme in MI
C. Trop I

Ans: ?

Q. A patient with microcytic hypochromic anemia has target cells:

A. Iron def anemia
B. Thallesemia
C. Lead poisioning

Ans. B>A (poor recall)

Q. Feature of dysplasia:

A- Loss of polarity and architecture
B- Pleomorphism
C- Metastasis
D- Invasion

Ans: A

Q. True Hermaphrodite karyotype is:

A- XY
B- XO
C- XYY
D- YY
E- XX/XX

Ans: A

Explanation: XX >XX/XY>XXY

Q. After secretion of trypsinogen into the duodenum, the enzyme is converted into its active form, trypsin by:

A- Alkaline PH
B- Procarboxypeptidase
C- Pancreatic lipase
D- Previously secreted trypsin
E- Enteropeptidase

Ans: E

Q. Cause of massive splenomegaly

a. Hairy cell leukemia
b. Thalassemia major
c. Infectious mononucleosis
d. All of the above

Ans. A (IM does cause splenomegaly but not massive)

Q. Derivative of 3rd pharyngeal arch is:

A- Stylopharyngeus
B- Stapedius
C- Maxillary
D- Facial

Ans: A

Q. Which structure is formed from deep parotid fascia?

A: Styloglossus
B: Stylopharyngeus
C: Stylomandibular ligament
D: Thymic bud

Ans: C

Q. 512 Hz tuning fork placed over head of patient. Receptors involved?

A: Pacinian
B: Merkels
C: Ruffini

Ans: A

Explanation:

High frequency vibration>Pacinian
Low frequency vibration>Meisner

Q. 18-year-old female with menorrhagia epistaxis and marked decreased platelets count with Giant platelets:

A- ITP
B- Bernard soulier syndrome
C- TTP
D- DIC

Ans: A

Explanation:

ITP – post vaccine + Low platelets count + Giant platelets.

Bernard – Giant platelets + Normal or Slight low platelets count + defect of GpIb

Glanzmann thrombasthenia: Glanzmann thrombasthenia is a congenital bleeding disorder caused by a **deficiency of the platelet integrin alpha IIb beta3**. This integrin is the platelet

fibrinogen receptor and is thus essential to platelet aggregation and hemostasis

Q. Primigravida with complain of headache and blueish spots on skin. Shistocytes on peripheral film:

A. Pre eclampsia
B. HELLP
C. HUS
D. TTP
E. DIC

Ans. B

Q. Regarding Staphylococcus Aureus.

A- Coagulase positive
B- Coagulase negative

Ans. A

Q. A drug which inhibits cAMP will be beneficial for which microorganismz; Vibrio cholera C perfringens acts by:

A. Producing lecithinase
B. Depleting ATP
C. Causing hypoxia

Ans: ?

Q. Vibro cholera:

A. Grows best at 42c
B. Grows in acidic medium
C. Grow in alkaline medium

Ans. C

Q. Most prominent toxin produced by strep pneumonia:

a. 1 streptolysin S
b. 2 M protein
c. 3 fibrinolysin
d. 4 streptolysin O
e. 5 capsule

Ans. D

Q. A young man with aplastic anemia was given antilymphocyte globulin (ALG). He had no immediate complication. 1 weak later he developed fver urticaria, arthralgia, and generalized lymphadenopathy. T pathophysiology of this diseases is:

a. Arthus reaction
b. Type I hypersensitivity
c. Type II hypersensitivity
d. Type III hypersensitivity
e. Type IV hypersensitivity

Ans. D

Q. Pyogenic peritonitis is caused by:

A- Bacteroids
B- E. coli
C- Group B Streptococus
D- Staphlococus

Ans: A

Explanation:

Ascetic Tap – E-coli
Peritonitis – E-coli
Pyogenic Peritonitis – Bacterioides
Peurperal Sepsis – Group B streptococcus > E coli > Bacterioides

Q. Most common cause of pyogenic lung abscess:

A- Staph Aureus
B- E.Coli
C- Streptococcus Pneumoniae
D- Klebsiella
E- H influenza

Ans: A

Q. 67 years old man presented with history of cough for the last 7 days and its also associated with thick yellow mucoid sputum, the organism responsible is:

A. Strep pneumonia
B. Stap aureus
C. Klebseilla
D. Legionella

Ans: B

(if just thick mucoid sputum is written then go for klebsiella)

Explanation:

Staph Aureus – Thick Yellow Sputum
Streptococus – Brown Rusty Sputum
Klebsiella – Current jelly mucoid Sputum

Q. Old age, fatigue, no imp finding on physical examination, MCV 89, segmented cells, band cells, metamyelocytes, diagnosis?

a. Chronic blood loss
b. CML
c. CLL
d. Malnourished

Ans. C

Q. A pregnant lady presented with obstructive Jaundice features which of the following investigation will confirm the diagnosis?

A- AST
B- Bilirubin
C- ALP
D- GGT

E- ALT
Ans: D
Explanation:
Viral: ALT>AST
Drug: ALT
Alcohlic: AST>ALT
Non alcohlic: ALT >AST
Non alcohlic (Cirhosis or Fibrosis): AST>ALT
Cholestatis Plus bone disease: ALP Raised
Hepatobilliary: Both ALP and GGT Raised
Liver disease plus pregnancy: Check GGT always
Conjugated hyper bilirubinemia
Billiary disease (Stones)
Dubin jonson
Rotor syndrome
Un conjugated hyper bilirubinemia
Hemolysis
Newborn
Cirgler najar
Gilbert
Mixed Hyperbillirubinemia
Hepatitis
Cirhosis

Q. An 11-month-old infant had upper and lower respiratory tract infections almost continuously since the time of birth, with organisms including Pneumocystis jiroveci and Pseudomonas aeruginosa identified. The baby also has oropharyngeal candidiasis. The baby succumbs to a cytomegalovirus pneumonitis at autopsy thymus is markedly hypoplastic, and lymph nodes throughout the body are small, with absent germinal centers on microscopic examination. Which of the following mechanisms is most likely to explain these findings?
A- Adenosine deaminase deficiency
B- Thymic hypoplasia
C- Human immunodeficiency virus infection
D- Autoantibodies to both T and B lymphocytes
E- Failure of development of 3rd and 4th pharyngeal pouches
Ans: A

Q. Submental and submandibular lymph nodes drains involve which area?
A- Tongue
B- Lower lip
C- Upper lip
D- Cheek
E- Neck
Ans: B
Adrenal gland venous drainage
Hemiazygos vein
IVC
B

Q. One wth multiple fractures of radius femur wth pulse 120 and bp 90/50 comes to ER initially:
A- Fluid replacement
B- Temp monitor
C- Splinting of fractures
D- Tracheostomy
Ans: A

Q. Third trimester pregnant lady dec cardiac output is in left lateral position to avoid compression of which abdominal structure?
A. IVC
B. Right lung
C. Liver
D. Spleen
Ans. A

Q. Common cause of fatty liver in Pakistan is:
A- Increase fatty intake
B- Obesity
C- Lack of exercise
D- Protein deficiency
Ans: D

Q. Absolute lymphocytosis is seen in:
Ans: Infectious mononucleosis

Q. Abnormally tall boy of 14-year age, with secretions from his mammary gland, x-ray shows enlarged pituitary gland, histology of pituitary show:
A. Dec. no. of pituicytes
B. Incr no of basophils
C. Hessing bodies seen in large no.
D. Incr no of eosinophills
E. Incr no of chromophobes
Ans. D
(Acidophils in prolactinoma are eosinophilic)
The pink **acidophils** secrete growth hormone (GH) and prolactin (PRL)

The dark purple **basophils** secrete corticotrophin (ACTH), thyroid stimulating hormone (TSH), and gonadotrophins follicle stimulating hormone-luteinizing hormone (FSH and LH)
The pale staining **chromophobes** have few cytoplasmic granules, but may have secretory activity.

Q. Whip like activity of cilia is seen in:
A. Cervix
B. Ovary
C. Fallopian Tube
D. Adrenal gland
Ans: C

Q. 6 yrs old boy presented with sore throat & fever. His microbiological review shows complete hemolysis on sheep blood agar. Most likely diagnosis is?
A. Group A beta hemolytic strep
B. Staph aureus
Ans. A

Beta hemolysis (complete hemolysis) Clear zones around colonies	Group A and B streptococcus
Alpha hemolysis (partial hemolysis) Green zones around colonies	Streptococcus pneumonia
Gamma hemolysis (No damage to RBCs)	S. mutans and Group D streptococcus

Q. Auer rods positive, which CD involved?
Ans. CD 33 (AML)

Q. Regarding pseudostratified epithelium:
A. Nasopharynx
B. Tubal tonsils
C. Ovary
Ans. A
Endoscope sterilization
Tyndalization

Q. DOC for T.Solium and schistosoma infection is which of following?
A- Praziquantel
B- Niclosamide
C- Metronidazole
D- Miconazole
E- Ciprofloxacin
Ans: A>B (FA)

Q. Nucleus ambiguous in located in:
Ans: Medulla

Q. Nucleus not in floor of 4th ventricle:
A) Facial
B) Abducent
C) Hypoglossal
D) Vagus
E) Vestibular
Ans. A
Remember even numbers 6,8,10,12 ARE present in floor of 4th ventricle

Q. Personality A people have harmful effect on heart due to:
A. Competitive drive,
B. Vigorous physical acts,
C. Loud speech
Ans. A

Q. RET gene mutation Associated with?
A. Follicular Carcinoma
B. Medullary Carcinoma
C. Undifferentiated neoplastic Carcinoma
D. Grave's disease
Ans. B
Remember:
Mutation in RET gene = Medullary
Mutation in RAS or P13/AKT Pathway = Follicular
Protein requirement in 70kg person.
120gm
14gm
100gm
56 gm
D
(1gm/kg/day)

Q. Cushing reflex is initiated by:
A- Decrease ICP
B- Increase ICP
C- Increase BP
D- Decrease BP
Ans: B

Q. Pt. had non productive cough for 2 months + blood streaked sputum left lug 5cm nodal mass sputum hyperchromatic pleomorphic cells e scanty cytoplasm, cause:
A. Smoking
B. Radon
C. Asbestos
Ans. A

Q. Benign tumor among the given:

A: Warthin tumor
B: Ameloblastoma
C: Erythroplakia
D: Dyaplastic nevus
Ans: A

Q. An elderly man is seen in emergency room with acute moderate diffuse abdominal pain. He is alcoholic acute pancreatitis is suspected. The pair of lab test most valuable in establishing diagnosis would be:
A- Serum Lipase and calcium
B- Serum amylase nand wbc count
C- Serum amylase and lipase
D- Serum calcium and blood cases
Ans: C

Q. Burn scenario decrease height of action potential:
A- Hypokalemia
B- Hyperkalemia
C- Hyponatremia
D- Hypernatremia
E- Hypocalcemia
Ans: C

Explanation:
Hypokalemia – Decrease nerve excitability in RMP
Hyperkalemia – Increase nerve excitability in RMP
Hyponatremia – Decrease hight of action potential
Hypernatremia – Increase Hight of action potential
Hypocalcaemia – Increase excitability
Hypercalcemia – Decrease excitability
Hyponatremia caused by
Volume overload
ADH deficiency
A>B

Q. A young female presented with lethargy gum bleeding, anemia petechiae and epistaxis best test for diagnose is:
A- CBC
B- Bone marrow biopsy
C- Coagulation profile
D- CT/BT
E- Electrophoresis
Ans: B

Q. 7yrs child anemic for two years with blood investigations shows decreased hb 6.5 also Hbf 97% ... Hba2 4% no hstry of bld transfusion spleen palpable
A. Thalasemia major
B. Thalasemia trait
C. Herditory sphero
D. Hereditary persistence of Hbf
Ans. A

For thalasemia (alpha) trait= dec Hb and Hct, Hb electrophoresis is normal (A=97, A2=2, F=1 %)
For thalasemia minor= dec Hb n Hct, Hb electrophoresis shows Hb A =93, A2= 5, F =2 %
For thalasemia major = dec Hb n hct, Hb electrophoresis shows A=0, A2=10, F= 90 %

Q. In primary syphilis best specimen for diagnosis is:
A- Blood
B- Genital sore
C- L.N
D- Bone biopsy
Ans: B

Q. Serological test will be best diagnosis for:
A. Q fever
B. Gonococcus
C. Nocardia
D. Actinomycosis
Ans. A (Q fever > Gonococcus)

Q. A young boy presented with complaint of chronic diarrhea not responding to gluten free diet. He also has villous atrophy. Likely diagnosis:
A. Celiac disease
B. Whipple
C. Giardiasis
D. Tropical sprue
Ans. C

Q. A 1 week old newborn is brought to the ED after a home delivery. His parents state they do not believe in vaccinations nor did they seek any medical attention after delivery. They state they have noticed bright red blood per rectum from the infant and he is very lethargic. On examination the infant has unequal pupils and his diaper has gross red blood. PT and APTT are both raised. What is the most likely diagnosis?
A) Cerebrovascular accident
B) Meckel diverticulum
C) Vitamin K deficient bleeding
D) Crohn disease
Ans. C

Q. A patient with ambiguous genitalia and karyotype 46xx diagnosis is:
A- CAH
B- Mixed gonadal dysgenesis
C- Testicular feminization syndrome
D- Androgen insensitivity syndrome
Ans: A

Q. Dead space remained unchanged in:
A- Asthma
B- Deep breathing
C- Bronchoconstriction
D- Bronchiectasis
E- Shallow breathing
Ans: E (E>B)
Explanation:
Pattern of breathing has no effect on dead space but Here E>B.

Q. A patient having cervical lymphadenopathy is suspected as having TB, which of the following is microscopic feature of TB?
A- Giant cell
B- Montoux test
C- X-ray chest
D- Caseous necrosis
Ans: D

Q. Monocytes likely:
A- Can transfer into large multinucleated giant cells in chronic infection
B- Increase in allergy
C- Produce IgM
D- Formed from precursor cells in lymph nodes
E- Do not migrate across capillary wall unlike granulocytes
Ans: A

Q. A pharmaceutical company sales representative comes to your office with an offer of foreign luxurious tour and offers you to give a talk on a newly launched drug in an educational seminar. What will be your response?
A. Respond arrogantly
B. Reject politely
C. Ask permission from hospital administration
D. Accept the offer if your colleagues participate
Ans. B
Ans. C Ceftriaxone

Q. A pt presents in ER with vasodilation and hypotension. Type of shock?
A. Septic
B. Hypovolemic
C. Cardiogenic
D. Vasovagal
Ans. A

Q. Neurogenic shock commonly presents with:
A. Decrease TPR
B. Decrease vasomotor tone
Ans. B

Q. A diabetic lady came in OPD with actinomycosis jaw draining abscess finding will be:
A- Abscess
B- Granuloma with abscess
C- Abscess
D- Discharge
Ans: B

Q. On 2nd day of life breast feeding baby present with jaundice indirect bilirubin 8.5 mg/dl, total bilirubin is 9 mg/dl, what is diagnosis?
A- Breast milk jaundice
B- Pathological jaundice
C- Physiological jaundice
D- Dublin Johnson
E- Rotor Syndrome
Ans: C
Explanation:
Pathological Jaundice – 1st day
Physiological Jaundice – 2nd day
Breast Milk Jaundice – 5-7 days

Q. Regarding histology of normal left kidney:
A- Cuboidal epithelium in parietal layer of bowman capsule
B- Podocyte on visceral layer of bowman capsule
C- DCT longer then PCT
D- Glomerulus has single arteriole
E- DCT has brush border
Ans: B

Q. Derivative of neural crest cells:
A. Endocardial cushion
B. Skeletal muscle
C. Smooth muscle
D. Glandular tissue
Ans. A

Q. Regarding bioavailability:
A- Is amount of drug reaching blood after being inactivated in liver
B- Is amount of drug reaching blood after being inactivated in gut
C- By pass kidney
D- Amount of active drug reaching blood
Ans: D
Alveolar ventilation formula
VA= R (VT-VD) where R is respiratory rate, VT is tidal volume, and VD is dead space volume.

Q. Hereditary spherocytosis defective protein is which of following?
A- Fibrillin
B- Titin
C- Dystrophin
D- Spectrin
E- Ankyrin
Ans: D

Q. Early wound healing is done by which type of collagen?
A- Collagen 3
B- Collagen2
C- Collagen1
D- Collagen4
E- Collagen 5
Ans: A
Explanation:
Early wound healing + granulation tissue – Type 3 collagen
Late wound healing + wound strength – Type 1 collagen

Q. Inflammation of portal traid which spills into adjacent lobules, bands of inflammation between portal traid and terminal hepatic vainand foci of liver cell necrosis throughout lobules?
A. Fulminant hepatitis
B. Chronic acute hepatitis
Ans. B

Q. Young woman infected with rubella after 7 week of preg, the child will have:
A. Congenital cataract
B. Congenital deafness
C. Congenital aphakia
Ans. B

Q. Satiety center in hypothalamus is regulated by:
a) Gastric dilatation
b) Blood glucose level
c) Insulin level
Ans. A

Q. A patient having Tachycardia abdominal distension and hypotension after laparotomy due to which of these
A- Hypovolemic Shock
B- Septic Shock
C- Cardiogenic Shock
D- Anaphylactic Shock
E- Neurogenic Shock
Ans: A

Q. Which is more aggressive?
A. Squamous cell carcinoma
B. Basal cell ca
C. Melanoma
Ans. C
Remember:
Most aggressive tumor- Melanoma
Locally malignant- BCC

Q. Histology slide shows rete ridges with nuclear atypia and nuclear pleomorphism with infiltrating malignant epithelial cells:
A- Verroceous Carcinoma
B- Squamous Carcinoma true
C- Transitional Cell carcinoma
D- Adenocarcinoma
Ans: A

Q. A patient has fever of 40 c with flank pain increase frequency chills and rigors. Diagnosis is done by:
A- Blood culture
B- Urine culture
C- Blood and urine culture
D- X-ray Kub
Ans: C
Explanation:
If no fever mention, then only urine culture.

Q. Monitoring thyroxine therapy is by:
A. TSH
B. Aldosterone
C. Renin levels
D. Blood pressure
Ans. A

Q. Which mechanism lie underneath the uterine fibroid?
A. Hypertrophy
B. Hyperplasia
C. Metaplasia
Ans. B

Q. How is depolarization from beginning of P wave to the beginning of QRS complex represented on ECG?

A. PR Interval
B. PR Segment
C. QRS Complex
D. PQ Interval

Ans. A

Note: The PR segment is the flat line between the end of the P-wave and the start of the QRS complex. Don't mix PR segment and PR interval!

Q. During thoracocentesis sample taken at 9th ICS, risk of damage to which structure?

A- 9th IC nerve
B- 10th IC nerve
C- Phrenic nerve
D- Pericardiophrenic artery
E- Internal mammary artery

Ans: A

In tetanic spasm increased respiratory rate patient is dyspneic due to
Decreased ionized calcium

Q. Tubular structure containing stratified squamous epithelium identified as vagina. What will be seen on microscopy/histology that differentiates it from other structures?

Ans: Lamina propria with elastic fibers.

Q. Non Pregnant lady with OGTT 122, after 1h 198 and after 2h 194 diagnoses:

A- Normal
B- DM
C- Gestational Diabetes
D- Impaired glucose tolerance

Ans: D

Q. Which of following fasting blood sugar level needs further investigation?

A) 15mmol/l
B) 10mmol/L
C) 5mmol/L
D) Less than 7 mmol/L

Ans. D (6.7 to be exact)

Q. A histological section of a gland shows many acini lined with pseudostratified columnar epithelium embedded in stroma, with smooth muscle in it. Which gland is this?

A- Prostate gland
B- Parotid gland
C- Submandibular gland
D- Seminal vesicle
E- Lacrimal gland

Ans: A (Fibromuscular stroma for prostate)

Q. Male and female patient divided into groups then subgroup which type of sampling it is?

A- Simple Random sampling
B- Stratified Random sampling
C- Mixed Sampling
D- Random Population

Ans: B

Q. Lady with complains of thick saliva. Which sympathetic receptor is responsible?

A- Alpha 1
B- Alpha 2
C- Beta 1 agonist
D- Alpha 1 and beta 1

Ans. D

Q. Primary dehydration will have:

A- Increase ECF osmolarity
B- Decrease ECF osmolarity
C- Increase ICF osmolarity
D- Decrease ICF Osmolarity
E- Isotonic ECF

Ans: A

Q. 45-year-old woman having weight loss with Increase T3 T4 Decrease TSH most likely diagnose is:

A- Primary Hypothyroidism
B- Primary Hyperthyroidism
C- Secondary Hyperthyroidism
D- Tertiary Hyperthyroidism
E- Primary Hyperparathyroidism

Ans: B

Q. In case of von willibrand disease there is marked platelets aggregation with Derranged pt and aptt which clotting factor involves?

A- Factor V
B- Factor VIII
C- Factor IX
D- Factor X

Ans: B

Q. Venous drainage of heart mainly by:

A- Great cardiac vein
B- Anterior cardiac vein
C- Middle cardiac vein
D- Coronary sinus

Ans: D

Q. Anterior interventricular artery accompanies which vein?

A- Middle cardiac vein
B- Great cardiac vein
C- Posterior cardiac vein
D- Thoracic vein
E- Marginal artery

Ans: B

Explanation:

Great Cardiac vein – Left ant. descending Artery (In anterior interventricular groove)
Great cardiac vein some part courses between left and right ventricle called Anterior cardiac vein (Anterior intervnetricular vein) accompany – LCX (In left coronary sinus)
Middle Cardiac vein accompany – Post. Interventricular artery
Small Cardiac vein accompany – Marginal artery

Q. A patient has frequently irregular pulse on examination. ECG shows no p wave and many abrupt R waves and QRS complex occurs irregularly what is the diagnosis:

A- Ventricular fibrillation
B- WPW syndrome
C- Atrial fibrillation
D- Atrial flutter

Ans: C

Q. The cause of the Left Axis deviation on then ECG is:

A- Left ventricular muscle damage
B- AV node damage
C- Purkinje fibers damage
D- Right ventricular damage

Ans: D

Explanation:

Left Axis Deviation:
LBBB
LVH
Right ventricular damage
Right Axis Deviation:
RBBB
RVH
Left Ventricular damage

Q. A 6-year-old child with history of joint swelling and bleeding during a circumcision. Raised aPTT. Which test should be done to confirm the diagnosis?

A- Factor V laden
B- Factor 9 assay
C- Factor 8 assay
D- PT

Ans: C

Q. Chronic fungal infection with rhinosinusitis causing medial erosion and granulomas:

A. Cryptococcus
B. Mucormycosis
C. Rhinopjycomycosis
D. Histoplasmosis
E. Aspergillus

Ans. E

Q. 19yr old boy presented to ER in unconscious state, his breath had fruity smell, temp 39, pulse 90, glucose 400, potassium 3.5, urea 10. Diagnosis:

A. HONK
B. DKA

Ans. B

Q. Few days after infection with typhoid the organism resides in:

A- Gallbladder
B- Lung
C- Payer's patches
D- Liver
E- Colon

Ans: C

Explanation:

Typhoid reside in payer patches 1-4 weeks
Gall bladder ->4 weeks
Gold standard for typhoid
Ans. Blood culture

Q1. Viruses cause cancer by alteration in?

a. Proto-oncogene's
b. Oncogenes
c. RNA

Ans: A

Q2. Receptors for detection of pressure and vibration?

a. Merkel
b. Ruffini
c. Messieners

Ans: B

Q3. Vein which opens directly in to the chambers of heart especially in to the right atrium?

a. Vane cordi minimi
b. Great cardiac vein

c. Anterior cardiac vein
Ans: C

Q4. After opening wardrobe, a child sees a cobra snake and there was flushing on his face. What response will be seen?
a. Sympatho adrenal
b. Somatic response
c. Vaso vagal
Ans: A

Q5. Which neck triangle is present between sup belly of omhyoid, SCM and post belly of digastric?
a. Brachiocephalic
b. Axillary
c. Carotid
Ans: C

Q6. Nucleus producing acetylcholine in brain?
a. Nucleus cereulus
b. Nucleus Accumbens
c. Nucleus basilis of mynert
Ans: C

Q7. Sternal angle level?
a. IV disc between T3 and T4
b. IV disc between T4 and T5
c. IV disc between T5 and T6
Ans: B

Q8. Germ cell migrates from?
a. Endometrium
b. Wall of yolk sac
c. Faalopian tube
Ans: B

Q9. Feature of malignant tumor?
a. Inc. N/C ratio
b. Pleomorphism
c. Metastasis
Ans C

Q10. Skeletal muscle injury after some time swelling and biopsy shows bone tissue and calcification. What is the cause?
a. Metaplasia
b. Metastatic calcification
c. Dystrophic calcification
Ans: A

Q11. Why decrease pain in pulp/gums in old age?
a. Dec receptors numbers
b. Dec cytokines
c. Neuropathy
Ans: C

Q12. Most common site of rib fracture?
a. head
b. angle
Ans: B

Q13. Case of rickets. Cause would be?
a. Vitamin C def
b. Vitamin A def
c. Vitamin D def
Ans: C

Q14. Stratified squamous epithelium?
a. Lens
b. Ovary
c. Pharynx
Ans: C

Q15. Neutrophils undergo oxidative burst. What is the main purpose of this reaction?
a. Bacteriostatic
b. Microbicidal
c. Dec Growth of fungus
Ans: B

Q16. IG A deficiency in child is associated with?
a. Peripehral neropathy
b. Repeated chest infection
c. Repeated UTI
Ans: B

Q17. Receptors for IgE A present on which cells?
a. Monocytes
b. Eosinophils
c. Basophils
Ans: C

Q18. Phagocytic activity presents in which cells?
a. NK cells
b. PMNS
c. Monocytes
Ans: B

Q19. Scenario of child with fever hypotension and erythematous rash of face and limbs. All these findings developed within 24 hours. What is the cause?
a. Endotoxin
b. Exotoxin
c. Erythrogenic toxin
Ans: C

(Hypotension/pseudomonas producing shock – endotoxin

Bleeding/ bruise/ diarrhea/ food poisoning/shigella/staph food poisoning – enterotoxin
Toxic shock syndrome – erythrogenic toxin> exotoxin
Streptococcal toxic shock syndrome – erhythrogenic or pyogenic exotoxin)
(Ref. SSF ABDI Errata)

Q20. Below knee amputation after some time developed multiple nodules at the stump. What is the cause?
a. Metaplsia
b. Neuroma
c. Lipoma
Ans: B

Q21. Tissue trauma leads to clotting of blood. What is the initial event?
a. Damage to Endothelium
b. Vascular leaking
c. Damage to collagen
Ans: A

Q22. Neurogenic shock characterized by:
a. Incr BP
b. Inc TPR
c. Dec peripheral vascular resistance
Ans: C

Q23. Endotoxin cause?
a. IL 1 activation
b. Inhibit prostacyclin
c. Hageman factor
d. Complement activation
Ans: D

Q24. Inflammation of all three zones of liver and wide spread necrosis. What is the cause?
a. Acute hepatitis
b. Fulminant hepatitis
c. Chronic hepatitis
d. Chronic active hepatitis
Ans: B

Q25. AST and ALT require which vitamin:
A B12
B B6
C B1
Ans B

Q26. Women taking HRT her sister had CA breast she is at risk of:
a. Endometrial Ca
b. Breast Ca
c. Ovary Ca
Ans: B

Q27. Most common originating site of pul. Embolism:
a. Popliteal vein
b. Femoral vein
c. Sural vein
Ans: B

(Source of PE or site where thrombus develops__ femoral vein
Site of DVT__ popliteal artery>femoral
Site of PE in lungs__ pulmonary artery)

Q28. V/Q mismatch is associated with?
a. COPD
b. High Altitude
c. IPF
Ans: A

Q29. Percentage % of Fat required in diet:
a. 15-20 %
b. 20-25 %
c. 25-30 %
Ans: C

Q30. Heart uses which of the following at basal level for energy?
a. Protein
b. CHO
c. Fats
Ans: C

Q31. Case of a chronic smoker given o2 therapy develops sudden onset dysnea. Cause?
a. PE
b. Tension Pneothorax
c. Spontaneous pneumothorax
Ans: C

Q32. U wave in ECG is associated with
a. Less Na
b. Less K
c. High K
d. High Ca
Ans: B

Q33. Pregnant women taking ferrous sulphate she is at risk of:
a. Pernicious Anemia
b. IDA
c. Folic acid deficiency
Ans: C

Q34. At which stage you will stop mitosis to see chromosomes at equitorial plane?
a. Prophase
b. Anaphase

c. Metaphase
Ans: C
Q35. Adverse blood transfusion reaction:
a. O-ve to AB+ve
b. O+ve to O+ve
c. A+ to AB-ve
Ans: C
Q36. Case of anaphylaxis. What to be give?
a. Dobutamine
b. Dopmaine
c. Epinephrine
Ans: C
Q37. Scenario of Acromegaly. Disturbance in?
a. FSH and LH
b. TSH and TRH
c. GhRh and Somatostatin
Ans: C
Q38. Decreased lymphatic drainage in:
a. Hemorrhage
b. Exercise
c. Inc. venous pr
d. Inc. arterial pressure
Ans: A
Q39. 25-year-old male with poly cystic kidneys?
a. Autosomal recessive
b. Autosomal dominant
c. X linked dominant
d. X linked recessive
Ans: B (Autosomal dominant diseases mnemonic)

(Very powerful dominant 6 humans)
1.Von Willebrand Disease/Von hippel Lindau
2.Pseudo-hypoparathyroidism
3.Dystrophia myotonica
4.Osteogenesis imperfecta/Osler weber
5.Marfan syndrome
6.Intermittent porphyria
7.Neurofibromatosis
8.Achondroplasia/Adult polycystic kidney disease
9.Noonan syndrome
10.Tuberous sclerosis
11.Hypercholestrolemia
12.Huntington's disease
13.Hypertrophic obstructive cardiomyopathy
14.Hereditary spherocytosis
15.Hereditary non polyposis coli
16.Hereditary hemorrhagic telangiectasia

Q40. Sarcoma treated with radiation therapy after some time skin undergo ulceration and contracture formation. What is the underlying cause?
a. Endarteritis obliterans
b. Squamous cell damage
c. HCC
Ans: A
Q41. Difference between right and left kidney:
a. Peritoneum
b. Size
c. Structures at hilum
Ans: C
Q42. Question about newborn liver:
a. 5% of body weight
b. Present in lower abdomen
c. Occupy whole of upper abdomen
Ans: A
Q43. Insulin does what as primary action:
a. Activate lipo protein lipase
b. Inhibit HSL
c. Potassium entry into cell
d. Na entry into cell
Ans: C
(Prime Action-Reduction in glucose level or increased utilization by tissues.
Immediate Action-Potassium entry into cells
Intermediate Action-Protein synthesis
Delayed action- Lipogenesis)
(Ref. SSF ABDI ERRATA)
Q44. Mean 80. SD 10. What percentage of values will be higher than 70?
a. 23%
b. 12%
c. 84 %
Ans: C
Q45. Which cells of liver are derived from endoderm?
a. NK cells
b. Kupfer cells
c. Hepatocytes
An: C
Q46. Anion gap may be defined as?
a. Diff b/w measured anions and unmeasured cations
b. Diff b/w unmeasured anions and cations
c. Diff b/w measured anions and cations
Ans: C
Q47. Gap junctions present in:

a. Skeletal Muscles
b. Smooth muscles
c. Cardiac muscles
Ans: C

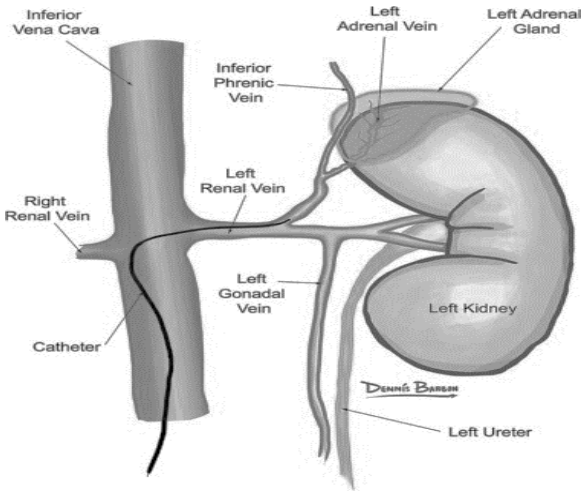
Q48. Myogenic generation of rhythm and striated muscles:
a. NK cells
b. Kupfer cells
c. Cardiogenic
Ans: C

Q49. Scenario of acid base balance. HCO_3 24, Inc $PACO_2$:
a. Respiratory alkalosis
b. Uncompensated respiratory acidosis
c. Mixed Acidosis and Alkalosis
Ans: B

Q50. Antibody in secondary immune response?
a. IgE
b. IgA
c. IgG
Ans: C

Q51. Hypothyroidism results in:
a. Increase Palpitations
b. Inc. BP
c. Inc. serum cholesterol
Ans: C

Q52. Left supra renal vein drains in to:
a. SVC
b. Right renal vein
c. Left renal vein
Ans: C



53. Nerves in dorsal root ganglion:
a. Pseudounipolar
b. Bipolar c. Unipolar

Ans: A

54. Stone in salivary gland duct leads to dec size of gland:
a. Metaplasia
b. Atrophy
c. Hypertrophy
d. Hyperplasia
Ans: B

55. 8 % of blood loss after 30 mins bp is normal. Blood loss is from:
a. Veins
b. Arteries
c. Capillaries
Ans: A

56. Increase in vertical diameter of thoracic cavity is by?
a. Internal ICM
b. External ICM
c. Diaphragm
Ans: C

57. 7^{th} segment of lung is known as:
a. Apical
b. Medial basal
c. Left Lower
d. Anterior basal
Ans: B

58. Characteristic of malignancy is:
a. Localized
b. Incr N/C ratio
c. Metastasis
Ans: C

59. Most important cell of granuloma:
a. NK cells
b. Monocytes
c. Epitheliod cell
Ans: C

60. Type A personality has Inc risk of MI. Why?
a. Aggregate
b. Socially hostile
c. Competitive drive
Ans: C

61. About Vibrio. Cholera?
a. Grows in Zeil Nelson
b. Grows in Acidic medium
c. Grows in alkaline medium
Ans: C

62. Hyperglycemia leads:
a. Inc. urine formation
b. Hyperventilation

c. Dec. urine formation
Ans: A

63. Ventricle is maximally filled:
a. Rapid Ejection
b. Period of Slow filling
c. Period of Rapid filling
Ans: C

64. Pka of phosphate buffer:
a. 7.0
b. 7.2
c. 6.8
d. 7.0
Ans: C

65. Fat embolism is associated with which of the following?
a. Pregnancy
b. COPD
c. RTA
Ans: C

66. Hepato cellular CA association:
a. HCG
b. AFP
c. BRCA
d. Desmin
Ans: B

67. Case of impaired glucose tolerance radiation induced tumor develop after how much time:
a. 10y
b. 8y
c. 5y
Ans: A

68. Which circulation is not regulated by metabolites?
a. Heart
b. Liver
c. Skin
Ans: C

69. Hypophyseal portal system connects to?
a. Pons
b. Post Pitutary
c. Ant pituitary
Ans: C

70. What initiates atherosclerosis?
a. Endothelial injury
b. Fatty streaks
c. Vasoconstriction
Ans: A

71. SIADH leads to which of the following?
a. Hypercacemia
b. Hypernatremia
c. Hyponatremia
Ans: C

72. Which drug has max oral bio availability?
a. Largely hydrophilic
b. Less hydrophobic
c. Largely hydrophobic but has aqueous solubility
Ans: C

73. Danger area of scalp:
a. Skin
b. Dua
c. Loose areloar tissue
Ans: C

74. Aspirin toxicity leads to:
a. Alkalosis
b. Hypothermia
c. Coma
Ans: A

75. Vit. C function is associated with:
a. Formation of Retinol
b. Metablosim of enzymes
c. Hydroxylation of pro collagen
Ans: C

76. Levator scapulae nerve supply:
a. C1 and C2
b. C3 and C4
c. C4 and C5
Ans: B

77. Desmosomes are connected by:
a. Intermediate filaments
b. Actin
c. Desmin
Ans: A

78. Nursing mother with oral herpes infection. Drug to be given:
a. Acyclovir
b. Trifluridine
c. Histamine
Ans: A

79. Nerve arising from antero lateral pons:
a. CN V
b. CN IV
c. CN VI
Ans: A

80. Ligamentum flavum association?

a. Connect Muslces
b. Connet vertebrae
c. Connect Adjacent lamina
Ans: C

81. Regarding meningeal artery:
a. Posterior branch at pterion
b. Anterior branch at pterion
c. Lateral branch at pterion
Ans: B

82. Therapeutic dose of a drug is determined by?
a. Potency
b. Efficacy
c. Toxicity
Ans: A

83. Elongated stratified lined by alveoli:
a. Trachea
b. Alveolar duct
c. Alveolar sac
Ans: B

84. Intra vascular hemolysis leading to pre-hepatic jaundice would be characterized by?
a. Inc unconjugated bilirubin
b. Absent hepatoglobin
c. Dec HCT
Ans: A

85. Increased myc expression seen in:
a. Lipoma
b. Hemangioma
c. Burkitts lymphoma
Ans: C

86. Inc ESR is associated with:
a. Dec fibrinogen
b. Dec albumin
c. Decreased thrombin
Ans: B

87. Tumor suppressor gene:
a. RAS
b. BRCA
c. P53
Ans: C

88. Man with sweating and dehydration drinks 2l of water. What will happen?
a. Dec ECF mainly
b. Inc ICF
c. Inc ECF
Ans: B

89. Minute ventilaton is:
a. TV x RR
b. RR x HR
c. Tv-dead space x RR
Ans: A

Q. Vein draining into SVC:
a. Axillary
b. Brachial
c. Azygous
Ans C

Q. Dec surfactant may associate with?
a. Decrease Elasticity
b. Increase Compliance
c. Decrease Compliance
Ans: C

Q. Hemi section of spinal cord finding on same side:
a. Loss of Pain
b. Loss of Temperature
c. Loss of proprioception
Ans: C

Q. Physiology of synaptic cleft:
a. Chl enter through legend gated channel
b. Na enter through legend gated channel
c. K enter through legend gated channel
Ans: B

Q. Weight of water in a given volume of air is:
a. Specific gravity
b. Dryness
c. Absolute humidity
Ans: C

Q. Regarding CSF:
a. Protein 20-40mg/dl
b. Na 138 meq/l
c. K 10 meq/l
d. Fat 21 %
Ans: A

Normal CSF values

Q. Salbutamol use is associated with which of the following?
a. Hypercalcemia
b. Hyperkalemia
c. Hypokalemia
Ans: C

Q. Pharyngeal stage of swallowing:
a Fixed Vocal Cords
b Vocal cords abduction
c Vocal cords adduction
Ans: C

Q. ICU floor and wall sterilization:
a. Ether

b. Ethanol
c. Glutaraldehyde
Ans: C

Q. Beta receptor activation leads to:
a. Bronchosonstriction
b. Bronchodialation
c. Salivation
Ans: B

Q. Feurosamide mechanism of action:
a. Inhibit Na/K/2Cl in DCT
b. Inhibit Na/Ca/2Cl in TAL
c. Inhibit Na/K/2Cl in TAL
d. Inhibit Na/Ca/2Cl in PCT
Ans: C

Q. Midbrain duct derived from:
a. Diancephalon
b. Prosencephalon
c. Mesencephalon
Ans: C

Q. Diameter of a vessel increased to 3 times:
a. Flow increase by 20 times
b. Flow increase by 81 times
c. Flow increase by 31 times
Ans: B

Q. Opoids is associated with which of the following?
a. Mydriasis and Tachycardia
b. Miosis and Braycardia
c. Headache and blindness
Ans: B

Q. Level at which dura, pia and arachnoid meet?
a. S3
b. S1
c. S2
Ans: C

Q. Gingival hyperplasia is associated with:
a. Haloperidol
b. Amytritaline
c. Phynetoin
Ans: C

Q. Steroid adverse effect:
a. Gingival Hyperplasia
b. Headache
c. Osteoporosis
Ans: C

Q. Warfarin toxicity treatment is associated with?
a. Packed Cells
b. Cryoprecipitate
c. FFP
Ans: C

Q. H2 blockers are not used in:
a. Dyspepsia
b. Zollinger Ellision syndrome
c. GERD
Ans: B

Q. Moa of PPI is which of the following?
a. Block Na Glucose Transport
b. Block Histamine Release
c. H/K ATPase inhibitor irreversible
Ans: C

Q. Patient of DM, came with complain of gastroperesis. Treatment would be?
a. Diphenhydramine
b. Ondensetron
c. Metoclopramide
Ans: C

Q. V wave of JVP is associated with which of the following?
a. Atrial relaxing
b. Ventricular
c. Atrial filling
Ans: C

Q. Flexor reflex associated with which of the following?
a. Air stimuli
b. Chemical stimuli
c. Noxious stimuli
Ans: C

Q. ECG shows saw tooth waves:
a. Mobitz-2
b. Afib
c. Atrial flutter
Ans: C

Q. 10 – 15% blood loss:
a 5 times RL
b 3 times RL
c 4 times RL
Ans: B

Q. Multiple fractures initial management:
a. Adrenaline
b. Atropine
c. Volume replacement
Ans: C

Q. Hypokalemia and hypertension:
a. Down syndrome
b. Dubin johnson syndrome

c. Conn's syndrome
Ans: C
Q. Neurogenic shock:
a. Loss of Pain
b. Loss of Temp
c. Loss of Vasomotor tone
Ans: C
Q. DM, HTN history of myxodema which anti hypertensive drug is suitable?
a. BBs
b. ARBs
c. Captopril
Ans: C
Q. PTU is doc for:
a. Bisphosponate
b. Hyperthyroidism and pregnancy
c. Hypothyroid
Ans: B
Q. Increased physiological dead space in:
a. DM
b. Hypertension
c. Hypotension
Ans: C
Q. Drug to be used for bacteriodes:
a. Vancomycin
b. Clindamycin
c. Co-trimoxazole
Ans: B
Q. Post MI best drug to prevent arrthymias:
a. Beta blocker
b. CCB
c. ARBs
Ans: A
Q. Pregnant lady with high BP before operation:
a. Methyl dopa
b. Isosorbide
c. Hydralazine
Ans: C
Q. Drug acting on AV node:
a. Aliskiren
b. ARBs
c. Verapamil
Ans: C
Q. Lateral curvature loss:
a. Aspergillosis
b. Silicosis
c. Scoliosis
Ans: C
Q. Dehydration leads to:
a. Increase GH
b. Inc Oxytocin
c. Inc ADH
Ans: C
Q. Warfarin monitoring by which of the following?
a. APTT
b. PT
c. ASO
Ans: B
Q. 54. Duration of sterilization with ethylene oxide:
a. 1 hour
b. 2 hours
c. 5 hours
Ans: B
Q. Pyramidal tract after decussating becomes:
a. Medial STT
b. STT
c. Lateral CST
Ans: C
Q. Right hemi paresis, pt can't speak but can understand. lesion at:
a. Post central gyrus
b. Motor speech area in dominant hemisphere
c. Frontal lobe
Ans: A
Q. Pain lower lumbar area and posterolateral leg, sensory loss on lateral foot and weakness of flexor hallucis longus:
a. Lesion at S3
b. Lesion at S2
c. Lesion at S1
Ans: C (Tibial Nerve)
Q. Infratemporal fossa is also known as:
a. Tonsillar fossa
b. Paraphyrangeal fossa
c. Cuboidal Fossa
Ans: B
Q. Peripheral nervous system myelination is by?
a. Astrocytes
b. Oligodentrocytes
c. Schwann cells
Ans: C

Q. Central nervous system myelination is by?
a. Astrocytes
b. Oligodentrocytes
c. Schwann cells
Ans: B

Q. Vein accompanying anterior inter ventricular artery:
a. Short cardiac vein
b. Middle cardfiac vein
c. Great cardiac vein
Ans: C

Q. Phospholipid cardiolipin present in:
a. Intermitochondrial membrane
b. RER
c. SER
d. Plasma membrane.
Ans: A

Q. Omeprazole mechanism of action:
a. Na/K pump inhibitor
b. Na/CHO pump inhibitor
c. H/K pumps inhibitor
Ans: C

Q. Turner syndrome scenario was given. Webbed neck and widely spaced nipples. Genetics was asked:
a. 46 XX
b. 44 XX
c. 45 XO
Ans: C

Q. Woman at gestational age …. Infected with german measles asking about the effect of this condition on the fetus:
a. Cataract
b. Heraing loss
c. Microcephaly.
Ans: A

Q. Which of the following are branches of end arteries?
a. Central retinal artery
b. Coronary arteries sup.
c. Mesenteric artery.
Ans: A

Q. Sequence of arteries in kidney → Renal artery → Interlobar artery → Arcuate artery → Interlobular artery

Q. Classic hemophilia scenario. Which factor is deficient in classic hemophilia?
a. Factor 8 long fragment
b. Factor 8 short fragment
c. Factor 9 short fragment
Ans: B

Q. 18. Best IV fluid replacement for third space fluid loss:
a. Normal saline
b. Ringer lactate
c. 5% dextrose.
Ans: B

Q. Cranial nerves which emerge from antero lateral pons:
a. 3, 4, 9
b. 1, 2, 3, 4
c. 5, 6, 7 and 8
Ans: C

Q. Most important buffer of interstitial fluid or plasma:
a. Bicarbonate
b. Protein
c. Phosphate.
Ans: A

Q. Investigation of choice for severity of asthma:
a. FEV1
b. FVC
c. FRC
Ans: A

Q. Nerve supply of mediastinal pleura:
a. Celiac Nerve
b. Phrenic Nerve
c. Axillary Nerve
Ans: B

Q. Plateau phase of cardiac cell action potential is due to:
a. K influx
b. Na influx
c. Ca+ influx
Ans: C

Q. Case of Burkitt's lymphoma. The virus was asked:
a. Epstein barr virus
b. HSV
c. HPV
Ans: A

Q. Muscle that increases transverse diameter of rib cage:
a. External intercostals
b. Diagphram
c. Trapezeus
Ans: A

Q. Daily CSF production:
a. 300 ml
b. 450 ml
c. 550 ml
Ans: B

Q. Antibody which is formed in secondary immune response:
a. IgG
b. IgM
c. IgA
Ans: A

Q. Damage to pituitary gland. Inhibition of which hormone is lost?
a. Dopamine
b. Prolactin
c. Adrenaline
Ans: B

Q. A medical student was observing surgery for the first time. Suddenly he lost consciousness. What is the mechanism?
a. Increase BP
b. Increase TPR
c. Decreased peripheral vascular resistance vasovagal syncope
Ans: C

Q. Cell membrane structure/integrity is maintained by:
a. Vimentin
b. Desmin
c. Spectrin and ankyrin
Ans: C

Q. Patient has lumbar pain radiating down to right leg. Ankle reflex was diminished. Right leg numbness/paresthesia. H/O lifting heavy weight:
a. Injury to Sural Nerve
b. Injury to pudendal Nerve
c. Injury to sciatic nerve
d. Injury to S1 root
Ans: D

Q. Why ketone bodies are produced in uncontrolled diabetes?
a. Due to lack of GH
b. Due to lack of Glucagon
c. Due to lack of insulin
Ans: C

Q. A man with diabetes mellitus came to you saying he has problem with his wife in bed your reply would be:
a. Please explain in detail about your problem
b. Reassure him that it is common in DM
c. Prescribe him viagra
d. Do the other labs to find the cause
e. Refer to sex therapist.
Ans: A

Q. Case of patient having jaundice with pruiritis due to:
a. Extrahepatic cholestasis
b. Intrahepativ cholestasis
c. Hepatitis
Ans: A

Q. Specific/Sensitive cardiomarker:
a. Creatinine kinas
b. Trop I
c. Alkaline phosphate
d. Myoglobulin
Ans: B

Q. Post Hypothalamic stimulation causes:
a. Hunger
b. Sweating
c. Inc metabolism and heat production
Ans: C

Q. Pregnant lady with stone in CBD which investigation is useful:
a. ALP
b. GGT
c. HCG
Ans: B

Q. Pacinians corpuscles detect:
a. High frequency vibrations
b. Low frequency vibration
c. Touch
Ans: A

Q. Pacinian carry sensations carries through:
a. A delta fibers
b. Beta
c. Fibers
Ans: A

Q. Patient taking Aspirn with ho allergy and nasal polyp is proneto which disease:
a. Emphysema
b. Interstitial pneumonitis
c. Asthma

d. Pulmonary HTN
Ans: C
Q. Clonidine MOA:
a. Beta-blocker
b. Alpha 1 antagonist
c. Alpha 2 agonist
Ans: C
Q. Labetolol Act through:
a. Alpha + beta receptort agonist
b. Beta receptor agonist
c. Alpha agonist
Ans: A
Q. Bronchial smooth muscler relaxation by:
a. Alpha adrenergic stimulation
b. Beta adrenergic stimulation
c. Mucaranic stimulation
Ans: B
Q. Thick saliavory secretions mediated by:
a. Alpha 1 rec stimulation
b. Muscarini crec
c. Beta adrenergic
Ans: A
Q. Most carcinoma contains which in term diate filament?
a. Vimetin
b. Keratin
c. Desmin
Ans: B
Q. On histopathology slide endocervixs contains straitified squamous epithelium this is due to:
a. Hyperplasia
b. Dysplasia
c. Metaplasia
Ans: C
Q. Tremors noted during activity is due to:
a. Parkinson disease
b. Cerebellar lesion
c. Paget disease
Ans: B
Q. Patient with hx of fever 39-degree C, dysuria and surgency Lab how TLC of 24 thousand but PML are 75%, which investigation is best?
a. Urine culture
b. Blood culture
c. Urine and blood culture
Ans: C
Q. After atrial depolarization to ventricular depolarization time show in:
a. PR interval
b. PR segment
c. ST Segment
Ans: A
Q. Lung abcess causative organism:
a. Staphylococcus aureus
b. Strep.pneumoni
c. E.coli
Ans: A
Q. Pyogenic peritonitis most commonly caused by:
a. E.coli
b. Bacteriodes
c. Staph Aureus
Ans: B
Q. After some time of c section lady presents with swelling atincision site which layer is 1st protruded by gut from in ward:
a. Transversalis muscle and fascia
b. Transversalis fascia
Ans: B
Q. During cardiac surgery which vein is with LAD which is causing bleeding?
a. Middle cardiac vein
b. Coronary sinus
c. Great cardiac vein
Ans: C
Q. In 2nd degree heart block:
a. Atria rate is less than ventricular rate
b. Ventricular rate is more than atrial rate
c. Atria rate is more than ventricular rate
Ans: C
Q. In condition when P-wave is in dependent of ventricular contraction (3rd degree block):
a. AV conductions slows down
b. AV conduction is completely blocked
Ans: B
Q. Most common cause of hydrocephalus is due to blockade of:
a. Formen of magendie
b. Foramen of lushka
c. Aque duct of sylvius
Ans: C
Q. Long term HRTcomplication:

a. Endometrial ca
b. Breast ca
c. Thrombo embolism
Ans: C

Q. 3-days old baby with c/o persistent vomiting changes seen in blood:
a. Hypo chloremic Metabolic Alkalosis
b. Metabolicacidosis
c. Respiratory acidosis
Ans: A

Q. Patient with end stage renal disease having ear infection which antibiotic should be given in reduced doses:
a. Erythomycin
b. Gentamycin
Ans: B

Q. Loss of memory and arousal what is involved?
a. Dorsomedial nucleus of thalamus
b. Reticular nucleus of thalamus
c. Myenert nucleus
Ans: B

Q. MOA of ondasteron for prevention of nausea and vomiting:
a. Antimuscaranic
b. Blockade of 5ht 3rec
c. Blockade of dopamine recin CTZ
Ans: B

Q. Pateint with complain of recurrent calcium renal stones which drug is useful:
a. Thiazides
b. Furosemide
c. Spiromide
Ans: A

Q. Child with malnutrition due to deficiency of:
a. Triglyceride
b. Histamine
c. Albumin
Ans: C

Q. Sterno cleidomastoid muscle function:
a. Head move to same side
b. Head move to same side against resistance
c. Head move to opposite side against resistance
Ans: C

Q. Cajal cells stain pink to foot processing grey matter:
a. Neurons
b. Fibrous astrocytes
c. Protoplasmic astrocytes
Ans: C

Q. GVE from which nucleus of vagus nerve:
a. Dorsal nucleus of vagus
b. Nucleus ambiguous
c. Nucleus Mynert
Ans: A

Q. Joint between vertebrae:
a. Synchondrosis
b. Symphysis
c. Sutures
Ans: B

Q. Important mediator of inflammation:
a. Histamine
b. Bradykinin
c. Prostaglandin
Ans: A

Q. After blood loss what will take more time to return to normal:
a. Red cell mass
b. Plasma volume
c. Plasma Concentration
Ans: A

Q. After 24 hrs of moderate hemorrhage what will occur?
a. Inc aldosterone
b. Dec hematocrit
Ans: B

Q. Growth hormone major stimulus:
a. Exercise
b. Sleep
c. Hypoglycemia
Ans: A

Q. Person stands from sitting position what will increases?
a. Cardiac out put
b. Venous compliance
c. SV
Ans: B

Q. Reticular layer is present in:
a. Dermis
b. Epidermis
Ans: A

Q. Tensile strength after wound healing is due to:
a. Type1
b. Type2
c. Type3

Ans: A

Q. Glucose absorption mainly occur in which part of nephron?

a. PCT
b. DCT
c. CT

Ans: A

Q. Hypothalamic hypophyseal portal system connect hypothalamus to:

a. Adeno hypophysis
b. Neuro hypophysis

Ans: A

Q. Cause of decrease excitability, and decrease in height and peak of Action poteintial due to:

a. Hyponatremia
b. Hypocalcemia
c. Hypokalemia
d. Hyperkalemia

Ans: A

Q. Patient with raised ICP and raised BP:

a. Auto regulation
b. Cushing's Reflex
c. Curning's Reflex

Ans: B

Q. Esophageous traverse diaphragm along with:

a. Thoracic aorta
b. Azygous vein
c. Right vagus

Ans: C

Q. Nerve supply to scalp posterior to auricle:

a. Auriculotemporal nerve
b. Lesser occipital nerve
c. Phrenic Nerve

Ans: B

Q. Pancreatic enzymes deficiency leads to:

a. Dec chylomicron sin blood
b. Dect break down
c. Dec break down of glucose
d. Lactulose intolerance

Ans: A

Q. Passive movement of molecules through carrier:

a. Faciliated diffusion
b. Active transport
c. Simple diffusion

Ans: A

Q. A-young boy got an acute attack of suffocation while eating peanuts. He was diagnosed to have aspirated peanut into trachea. This ultimately passes into lob are bronchus which is most likely to be:

a. Left inferior
b. Right inferior
c. Right middle middle
d. Right superior

Ans: B

Q. Insulin release in response to:

a. Somatostatin
b. Glucogan
c. Increase glucose in blood

Ans: C

Q. Skin antiseptic and agent used in scrubbing:

a. 2% gluteraldehyde
b. Chlorhexidene

Ans: B

Q. Low cardiac output failure:

a. Beriberi
b. AVfistula
c. CHF

Ans: C

Q. Tx for Hypothyrodism:

a. TSH
b. Levothyroxine

Ans: B

Q. Dexamethasone in comparision to Hydrocortisine has less:

a. ACTH suppression
b. Na retention
c. Immuno-suppression

Ans: B

Q. Functional residual capacity:

a. IRV+TD
b. ERV+RV
c. TLC-RV

Ans: B

Q. Good analgesia with weak anesthetic property:

a. N_2O
b. Ketamine

Ans: A

Q. T cell antigen binding by:

a. Macrophage
b. MHC

Ans: B

Q. In lactating women amenhorrea due to inhibition of:
a. Prolactin
b. GnRH
c. Dopamine
Ans: B

Q. Smooth muscle property:
a. Branched cells
b. Slow sustained contraction
Ans: B

Q. Old lady with no any family history of bleeding disorder came ec/oblue patches over skin and bleeding mainly due to:
a. VWF disease
b. Haemophilia
c. Thrombo cytopenia
Ans: C

Q. Which test used to monitor Heparin?
a. Aptt
b. PT
c. INR
d. Factor S
Ans: A

Q. Sympathetic stimulation decreases:
a. HR
b. ST segment
c. AV nodal delay
Ans: C

Q. Rapid reversal of warfarin action:
a. Vit. K
b. FFP
Ans: B

Q. Definition of compliance of lung:
a. Volume
b. Pressure
c. Extension
Ans: A

Q. In Pancreatic fistula what is the role of Somatostatin:
a. Decrease secretions
b. Inhibits enzymes
c. Relieve pain
Ans: A

Q. Xiphoid process presents at the level of:
a. 7th vertebrae
b. 9th vertebrae
c. 8th vertebrae
Ans: B

Q. In emergency what will you give to patient with hyperkalemia:
a. IV calcium gluconate
b. Dextrose
c. Insulin
Ans: A

Q. RBCs structure maintained by:
a. Spectrin
b. Tubulin
c. Desmin
d. Vimentin
Ans: A

Q. 1st line of defence against infection:
a. Skin
b. Macrophages
c. Neutrophils
Ans: A

Q. Which sensation is lost on same side of body in hemisection of spinal cord?
a. Proprioception
b. Pain
c. Temperature
Ans: A

Q. Tx of Pheocromocytoma given before surgery:
a. Alpha blocker
b. Alpha + Beta blocker
c. Beta blocker
Ans: B

Q. Dorsal column of spinal cord carries sensation of:
a. Proprioception
b. Pain
c. Temperature
Ans: A

Q. MOA of Propyl thyrouracil:
a. Deciodide uptake
b. Dec. synthesis of thyroid hormone
c. Dec. synthesis of thyroid hormone
Ans: B

Q. ATT is given in combined form due to:
a. Additive effect
b. Early emergence of resistance bacteria
c. Delay emergence of resistance bacteria
Ans C

Q. Regarding bone:
a. ALP is produced by osteoblast
b. Intermembranous ossification occur by cartilage
c. Haversian canal contain osteoblast

Ans: A

Q. Chorionic cavity:

a. Also known as extra embryonic coelom
b. Fetus freely float in it
c. Part of embryo

Ans: A

Q. Insertion of transversalis abdominus:

a. Linea alba and pectineal crest
b. Linea alba pectineal line and pectineal crest
c. ASIS and Linea Alba

Ans: B

Q. Sensation of pain from floor of orbit to mouth carried by:

a. Ophthalmic division of trigeminal
b. Maxillary division of trigeminal
c. Mandibular division
d. CN VII

Ans: B

Q. Phrenic nerve main contribution by:

a. C3
b. C4
c. C5

Ans: B

Q. Proportion of ICF in total body water:

a. 60%
b. 40%
c. 20%

Ans: A

Q. Blood flow to brain:

a. 50ml/100mg/min
b. 100ml/100mg/min
c. 150ml/100mg/min

Ans: A

Q. Progesterone main action:

a. Inc. secretion of glands
b. Dec. uterine contractions
c. Breast swelling

Ans: C

Q. LES tone increases by:

a. Anti Muscarinic
b. Gastrin
c. Fatty meal
d. Smoking

Ans: B

Q. Girl with type one diabetes have mostly hyperglycemia in morning. Which is appropriate option?

a. Regular insulin before meal
b. Long acting insulin twice, a day before meal
c. Regular and intermediate insulin twice a day

Ans: C

Q. Evaporational and non-evaporational heat loss depends in:

a. Thermal gradient
b. Constantly maintained by hypothalamus
c. Thermoreceptors in skin
d. Remain constant
e. Depends on core body temperature

Ans: E

Q. Injury to L5 root results in:

a. Loss of ankle reflex
b. Brisk ankle reflex
c. Loss of dorsi flexion
d. Loss of plantar flexion
e. Babiniski sign+ve

Ans: C

Q. Parasympathetic secretomotor to sublingual and submandibular gland through:

a. Great petrosal nerve
b. Chordae tympani

Ans: B

Q. Scenario of bacterial meningitis tx:

a. Pencillin G
b. Ampicillin
c. Cloxacillin
d. Cefazolin

Ans: A

Q. Ligament pierced during paramedian approach in LP:

a. Inter spinous ligament
b. Ligamantm flavum

Ans: B

Q. Man, with aphasia lesion seen at:

a. Posterior lateral prefrontal gyrus
b. Motor cortex
c. Sensory cortex

Ans: A

Q. 176. Inflammation of the portal triads whichs pills into adjacent lobules, bands of inflammation extending between portal areas and terminal hepatic veins and focioflivercell necrosis through out the lobules is most likely the picture of:

a. Chronic acute hepatitis
b. Fulminant hepatitis
c. Chronic recurrent hepatitis

d. Cirrhosis
e. Chronic persistent hepatitis
Ans: A
Q. Patient has attack of acutes severe asthma, best option for management:
a. Oral prednisone
b. Iv salbutamol
c. Nebulized salbutamol
Ans: C
Q. Adrenal gland:
Ans: Supplied by thoracic sympathetic
Q. Regarding nephron:
a. Glomerulus has single arteriole
b. Podocytes presenting glomerulus
Ans: A
Q. In hypokalemia I/V potassium given how will it enter into cells:
a. H/K ATPase
b. Na/K ATPase
Ans: B
Q. SVT scenario, treatment:
a. Veramapil
b. Nimodipine
c. Nifedende
d. Propranolol
Ans A
Q. Scenario of Organophosphate poisoning in a young male pt, farmer spraying insecticide in greenhouse, which drug for treatment?
a. Atropine
b. Physiostigmine
c. Pralidoxime
Ans: C
Q. Pt underwent terminal ilectomy, can cause?
a. Increase water loss
b. Increase fat in stool
c. Increase water content in stool
d. Increase bile acid in circulation
e. Decease fat content in feces
Ans C
Q. Inverted T wave:
a. Old MI
b. Hypokalemia
c. Hyperkalemia
Ans: B
Q. H1 blocker side effect:
a. Earache
b. Sedation
c. Headache
Ans: B
Q. Highest melting point of DNA with which base pair?
a. Guanosine and cytosine
b. Arginine and Guanine
c. Cytosine and Thiamine
Ans: A
Q. Plurocentesis site:
a. 9th ICS mid axillary line, lower border
b. Upper border of 9th ICS midaxillary line
c. Upper border of 9th ICS midclavicular line
d. Lower border of 9th ICS midclavicular line
Ans: A
Q. Spinal Cord ends in children at level of:
a. L1
b. L2
c. L3
d. L4
e. L5
Ans: C
Q. Majority of ant surface of heart formed by:
a. Rt. ventricle
b. Left vent
c. Left atria
Ans: A
Q. Left circumflex artery supplies:
a. Right Ventricle
b. Right Atria
c Left artrium and left ventricle
Ans: C
Q. Babinsky sign not positive in:
a. UMNL
b. LMNL
c. Infants
d. Alcoholics
e. Deep sleep
Ans: B
Q. Antacids which decrease gastric emptying?
a. Alum OH
b. Mg OH
Ans: A
Q. Stroke volume increased, no effect on heart rate and peripheral resistance, effects:
a. Decrease MAP
b. Decrease Pulse pressue
c. Increased Pulse pressure and MAP

Ans: C

Q. Decreased PaO_2:

a. Hypoxic Hypoxia
b. Anomic Hypoxia

Ans: A

Q. Case of elderly patient in a Cardiac Care Unit, what is expected to feel normally:

a. Depressed and anxious – normal response
b. Delusional and hallucinations
c. Panic attacks

Ans: A

Q. Chronic pain management:

a. Psychosocial evaluation and detailed analysis
b. Acupuncture
c. Electrical stimulus

Ans: A

Q. S2, 3, 4 lesions:

a. Anal incontinence
b. Anorgasmia
c. Painless labor

Ans: A

Q. Scenario of Diarrhea, Serum Cl = 110, sodium 131, Potassium 2.5, anion gap 10, pt had:

a. Hyperchloremic Metabolic Acidosis with normal anion gap
b. Hyperchloremic Metabolic Acidosis with increased anion gap

Ans: A

Q. Prolonged PR, Inverted T waves and U waves seen which abnormality is it?

a. Hyponatremia
b. Hyperkalemia
c. Hypokalemia

Ans: C

Q. Sneeze reflex taken to brain by:

a. CN5
b. CN10
c. Opthalmic N
d. Nasocilliary N
e. Olfactory nerve

Ans: A

Q. ADH acts on:

a. CT
b. PCT
c. Distal Collecting Ducts

Ans: C

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PATHOLOGY

September 17th – 2019

Q1. In which disease "Langhan's giant cells" are seen?

A. TB
B. Sarcoidosis
C. Multiple myeloma
D. Rheumatoid arthritis

Ans: A

Q2. Pleurocentesis safe anatomical location is:

A. Upper boarder 9th Ribs mid Clavicular line
B. Lower boarder 9th intercostal space mid clavicular line
C. Lower boarder 9th intercostal space mid axillary line
D. Lower boarder 9th intercostal space mid clavicular line
E. Posterior aspect of chest wall at 5th intercostal space

Ans: C

Explanation:

- Upper border of 9th Rib Midaxillary line
- Lower border of 9th ICS midaxillary line

Q3. In renal transplant, what is the single most significant test to be done?

A. ABO Grouping and cross matching
B. HLA typing and matching
C. MHC
D. Graft vs host
E. CBC

Ans: B

Remember:

- Important test for transplant – HLA typing
- Best blood cell for HLA sampling– WBC
- Best site for HLA sampling – Buccal Mucosa
- Best tissue for HLA sampling – Bone marrow

Q4. A lady presented with fever and jaw abscess with draining sinus and yellow granules. Causative organism is:

A- Staph Aureus
B- Actinomyces
C- Pseudomonas
D- Treponema
E- Proteus

Ans: B

Q5. Post op wound having greenish pus discharge, which organism is involved?
A- Staph Aureus
B- Pseudomonas
C- Actinomycetes
D- Streptococcus
Ans: B

Q6. Tumor Suppressor gene is:
A- BRCA
B- RET
C- P53
D- BCL
Ans: C

Other MCQs related to p53:

Q7. Which one is DNA repair gene?
A- BCL2
B- BCLX
C- P53
D- KRAS
Ans: C

Q8. Promoter region causes cancerous growth by change in which of following?
A- P53
B- Kras
C- Bcl2
D- Myc
Ans: A

Q9. Which artery is an important content of suboccipital triangle?
A. Vertebral artery
B. Femoral artery
C. Axillary artery
D. Brachial artery
Ans. A

Q10. Female patient presented with pallor, lethargy, headache, fatigue and loss of vibration sense in lower limbs, what could be the cause?
A. Vit. B12 deficiency anemia
B. Folic acid deficiency anemia
C. Sickle cell anemia
D. Sideroblastic anemia
Ans: A

Q11. In pregnancy iron deficiency anemia is best diagnosed by:
A- Serum ferritin
B- Serum ferritin + inc TIBC
C- Serum transferrin
D- None
Ans: A (Davidson)

Q12. A male presented to OPD with 104 fevers for last 4 days and gives history of using Anti-malarial She has been passing cola color urine for the last 1 day with deranged LFTs and increased unconjugated bilirubin. What is the cause?
A- G6PD
B- Black Water fever
C- Drug induced jaundice
D- Paroxysmal nocturnal hemoghlobinuria
E- Hemaolytic yremic syndrome
Ans: A

Q13. Insoluble form of iron stored is:
A- Transferrin
B- Hemosiderin
C- Ferritin
D- Hemoglobin
Ans: B

Explanation:
- Iron Transport form – Transferrin
- Iron excess insoluble storage form – Hemosiderin
- Iron normal storage form – Ferritin

Q14. Which of the following organism produces hemorrhagic fever when a person gets infected for the 2nd time with another serotype?
A. CMV
B. HSV
C. Dengue
D. Rubella
Ans: C

Q15. Which of the following is a disease caused due to mosquito bite?
A. Tularemia
B. African sleeping sickness
C. Yellow fever
D. Plague
Ans: C

Q16. The primordial germ cells are derived from?
A- Ectoderm
B- Epiblast
C- Endoderm
D- Mesoderm
E- Neural crest cell
Ans: B

Explanation:

Epiblast >Ectoderm>Yolk sac endoderm

Another important related MCQ:

Q. Primordial germ cells are formed at:

A- The beginning of 5th Week
B- The end of 3rd Week
C- The end of 4th Week
D- Start of 4th Week
E- End of 6th Week

Ans: B

Q17. A Man smoke 20 packs per month work in factory he develops lung cancer which carcinogen in Cigrette causes lung cancer?

A- Nitrosamines
B- Hydrocarbons
C- Vinyl chloride
D- Azo dye
E- Arsenic

Ans: B

Explanation:

- Plastic factory worker – Liver Angiosarcoma
- Plastic factory worker + Smoking – Lung CA > Angiosarcoma
- Hydrocarbon (tyre factory) + Aromatic amines – Bladder CA
- Smoking + Hydrocarbon – Lung CA > Bladder
- Liver CA – Acohol >Aflatoxin > Smoking
- Transitional bladder CA – Smoking > Amines > Hydrocarbon
- Squamous cell bladder CA – Schistostoma > Stones > Indwelling

Q18. Common cause of fatty liver in Pakistan?

A- Increase fatty intake
B- Obesity
C- Lack of exercise
D- Protein Deficiency

Ans: D

Q19. Patient with bettle nut and pan chewing history, mouth lesion will be:

A- Leukoplakia
B- Erythroplakia
C- Sub mucosal fibrosis
D- Chronic ulcer
E- Basal cell carcinoma

Ans: C

Q20. Rigor mortis is due to:

A- Increased ATP
B- Decreased ATP
C- Increase Cal-Calmodulin levels
D- Decrease Ca
E- Increase phosphate

Ans: B

Q21. What is a structure with indistinct layers of outer longitudinal and inner circular smooth muscles with ciliated columnar epithelium?

A. Utreus
B. Endocervix
C. Bladder
D. Fallopian tube

Ans. D

Donot confuse with this MCQ:

Tubular structure with Small lumen and transitional epithelium with 3 layers of smooth muscle and Outer well developed adventitia related to:

A- Ureter
B- Ilium
C- Bladder
D- Appendix
E- Fallopian tube

Ans: A

Also remember:

- ✓ Columnar epithelium with Crypts – Uterus (Uterus also has middle layer of indistinct smooth muscle)
- ✓ Columnar epithelium with Crypts – Endo cervix
- ✓ Columnar epithelium with Clefts- Fallopian tube

Q22. Female patient on HRT having risk of which of following?

A- Ovarian CA
B- Endometrial Ca
C- Breast CA
D- Headache
E- Thromboembolism

Ans: E

Explanation:

- Low estrogen OCP cause – Hepatic adenoma
- High estrogen OCP prolong/long term use cause in post-menopausal – ENDOMETRIAL CA
- Estrogen containing ocp increase risk of – Thromboembolism (DVT)
- HRT increase risk of –DVT (Thromboembolism)

- Mixes HRT containing both estrogen and progesterone cause – Breast CA (Robins)

Q23. Which of the following structures can be compressed by supernumerary rib causing symptoms like numbness and paresthesia in left arm along with colour changes?

A. Brachial plexus only
B. Subclavian vessels only
C. Axillary artery
D. Brachial plexus and subclavian vessels

Ans. D

Q24. Which of the following best describes epithelium of ductus deferens?

A. Muscular tube with pseudostratified columnar epithelium and cilia
B. Muscular tube with stratified squamous epithelium
C. Fibrous structure with dome cells
D. Fibrous structure with pseudostratified columnar epithelium

Ans. A

Remember the following important epithelia:

Female Genital System

Ovaries..... Simple cuboidal
Uterine tube.....simple columnar (ciliated)
Uterus.....simple columnar (partly ciliated)
Endocervix....simple columnar
Ectocervix + vagina.... Stratified squamous

Male Genital System

Seminiferous tubules..... stratified cuboidal
Epididymis + ductus deference +seminal vesicle.... Pseudostratified columnar

Urinary System

Bowmans capsule...parietal layer....simple squamous
Bowmans capsule....visceral layer...podocytes
Proximal tubule....simple columnar
Loop of henle.....simple squamous
Distal tubule + collecting duct...simple cuboidal
Ureter +urinary bladder....transitional
Prostatic urethra...transitional
Membranous + penile urethra... Pseudostratified columnar with patches of stratified squamous and columnar
Female urethra.... Stratified squamous with patches of pseudostratified columnar and stratified columnar...

Q25. Turner syndrome karyotype is:

A- 47XXY
B- 45XO
C- 46XY
D- 44XO

Ans: B

Q26. A patient with epicanthal folds mental retardation, protruded abdomen what is diagnose of chromosomal abnormality?

A- Trisomy down syndrome
B- Patau syndrome
C- Edward syndrome
D- Cri du cat syndrome
E- Omhpalocele

Ans: A

Q27. In which stage of erythropoiesis does Hb synthesis start?

A. Intermediate normoblast
B. Late normoblast
C. Early normoblast
D. Reticulocyte

Ans: C

Remember:

- ✓ Hemoglobin synthesis starts in – Proerythroblast or Early Normoblast
- ✓ Hemoglobin First appears in – Intermediate Normoblast
- ✓ RBC Nuclei disappear in – Late Normoblast >Reticulocytes
- ✓ Max Production – Late Normoblast
- ✓ Maximum concentration – Reticulocytes

Q28. RBCs swell up when placed in:

A. 150mmol NaCl
B. 110 mmol CaCl
C. 250mmol Urea
D. 151 mmol NaCl

Ans. C

Q29. Which of the following is a very rare but fata complication of measles that develops 7-10 years late after infection?

A. Infertility
B. SSPE (subacute sclerosing pan encephalitis)
C. Pancreatitis
D. Arthritis

Ans. B

Remember:

Most frequent immediate complication – pneumonia

Q30. Sperms become partially motile in the:
A- Sertoli cells
B- Seminiferous tubules
C- Rete testis
D- Epidydmis
Ans: D

Q31. Bone remodeling is done by:
A- Osteocyte
B- Osteoclast
C- Osteoblast
D- Osteoblast + Osteoclast
Ans: D

Explanation:
- Osteoblast – Form Bone matrix
- Osteoclast – Resorption of Bone matrix
- Osteocyte – Maintain Bone integrity
- Bone Demineralization – PTH
- Bone Mineralization – Vit. D
- Bone Remodeling Vitamin – Vit. C

Q32. Blood supply of parathyroid glands is via?
A. Both superior and inferior thyroid arteries
B. Only superior thyroid artery
C. Thyroid ima artery
D. Only inferior thyroid artery
Ans. A

Q33. Secondary ossification center at birth present in:
A- Distal end of Femur
B- Proximal end of Femur
C- Metaphysis
D- Epiphysis
E- Proximal Tibia
Ans: D

Remember:
Primary ossification center – Diaphysis
Primary ossification center at birth present in – Distal end of femur

Q34. Nasopharyngeal carcinoma caused by:
A- HPV
B- CMV
C- EBV
D- HSV
E- Hep B
Ans: C

Explanation:
- Nasopharyngeal CA – EBV
- Oropharyngeal CA – HPV
- Lung CA – CMV

Q35. Difference between cardiac and skeletal muscle?
A- Transverse striations
B- Cardiac muscle has low T Tubules
C- Cardiac muscle doesn't get tetanized
D- Calmodulin

	Skeletal	Cardiac	Smooth
Striation:	striated	somewhat striated	non-striated
Cells:	straight cylindrical parallel, non-branching	tapered cylinders parallel & branched	spindle shape
Nucleus:	multi-nuclei, peripheral	mostly uni-nucleus most peripheral	uni-nucleus central
Discs:	none	intercalated	none
Location:	attach bones	cardiac wall	hollow organs
Control:	voluntary	involuntary	involuntary
Function:	body movement	heart contraction	visceral & circulatory
Speed of contraction:	fastest	intermediate	slowest

Ans: C

Q36. What is the primary prevention of dental caries?
A. Fissure filling
B. Proper brushing technique
C. Tongue scraping
D. Use of mouth wash
Ans. B

Q37. Patient had lesion of articular surface and capsule of temporomandibular joint unable to open mouth this is due to damage of:
A- Lateral pterygoid
B- Masseter
C- Medial pterygoid
D- Buccinator
E- Platysma
Ans: A

Q38. Spore killing is via:
A. Moist heat at 121C for 15 minutes and 15 psi presssure
B. Moist heat at 131C for 15 minutes and 15 psi pressure
C. Dry heat at 121C for 15 minutes and 15 psi pressure
D. Dry heat at 131C for 15 minutes and 15 psi pressure
Ans. A

Remember: If this is not in options then choose "dry heat for 2 hours at 160C".

Q39. A person was admitted in a coma. Analysis of the arterial blood gave the following values: PCO2 16 mm Hg, HCO3 - 5 mmol/l and pH 7.1. What is the underlying acid-base disorder?

A. Metabolic Acidosis
B. Metabolic Alkalosis
C. Respiratory Acidosis
D. Respiratory Alkalosis

Ans. A

Q40. In a man undergoing surgery, it was necessary to aspirate the contents of the upper gastrointestinal tract. After surgery, the following values were obtained from an arterial blood sample: pH 7.55, PCO2 52 mm Hg and HCO3 – 40mmol/l. What is the underlying disorder?

a) Metabolic Acidosis
b) Metabolic Alkalosis
c) Respiratory Acidosis
d) Respiratory Alkalosis

Ans. B

Note: The topic of acid base disorders is extremely important. Atleast 2-3 questions come in every exam for pathology candidates. Your concepts should be crystal clear regarding this topic as the statements are changed and of high difficulty. Please familiarize yourself fully with the topic and practice the following MCQs:

Q41. A young woman is found comatose, having taken an unknown number of sleeping pills an unknown time before. An arterial blood sample yields the following values: pH – 6.90, HCO3 - 13 meq/liter, PaCO2 68 mmHg. This patient's acid-base status is most accurately described as:

a) Uncompensated metabolic acidosis
b) Uncompensated respiratory acidosis
c) Simultaneous respiratory and metabolic acidosis
d) Respiratory acidosis with partial renal compensation

Ans. C

Q42. A student is nervous for a big exam and is breathing rapidly, what do you expect out of the followings?

a) Metabolic Acidosis
b) Metabolic Alkalosis
c) Respiratory Acidosis
d) Respiratory Alkalosis

Ans. D

Q43. A 45- year-old female with renal failure, missed her dialysis and was feeling sick, what could be the reason?

a) Metabolic Acidosis
b) Metabolic Alkalosis
c) Respiratory Acidosis
d) Respiratory Alkalosis

Ans. A

Q44. An 80-year-old man had a bad cold. After two weeks he said, "It went in to my chest, I am feeling tightness in my chest, I am coughing, suffocated and unable to breathe!" What could be the possible reason?

a) Metabolic Acidosis
b) Metabolic Alkalosis
c) Respiratory Acidosis
d) Respiratory Alkalosis

Ans. C

Q44. 40yrs old male with jaundice liver function tests shows direct bilirubin 10, ALP 1000, ALT 75, GGT 227 what is the most likely diagnosis?

A- Intrahepatic cholestasis
B- Hepatic cholestasis
C- Bile duct obstruction
D- Drug induced jaundice
E- Extra hepatic cholestasis

Ans: E

Q45. O positive female with history of many blood transfusions, what will happen?

A- Hemochromatosis
B- Hemoglobinemia
C- Hyperkalemia
D- Hemosidrosis
E- Hypokalemia

Ans: A

Explanation:

- Massive Transfusion – Hyperkalemia
- Multiple or Continous – Hemochromatosis
- Repeated Transfusion – Hypocalcemia

Q46. Which among the following is the most responsive leukemia in children?

A. ALL
B. AML
C. CLL

D. CML

Ans. A

Q47. VSD has relation with which of following disorder?

A- Down syndrome
B- Klinefelter syndrome
C- Patau syndrome
D- Edward syndrome
E- Marfan syndrome

Ans: A

Explanation:

The 5 A's of down syndrome:

- Advanced maternal age
- Atresia (duodenal)
- Atrioventricular septal defect
- Alzheimer disease (early onset)
- AML/ALL

Q48. A patient has lesion in epiphyseometaphyseal region of knee with giant cells and little mitosis. Most common carcinoma with giant cells seen on histology is:

A- Osteoblastoma
B- Osteosarcoma
C- Giant cell tumour
D- Ewing sarcoma

Ans: C

Remember:

Remember mnemonic **"GEOMEDOV"** (giant cell in epiphysis, osteosarcoma in metaphysis, ewing's sarcoma in diaphysis, osteoblastoma in vertebrae)

- ✓ Giant cell tumor (Soap bubble appearance) – Epiphysis
- ✓ Osteosarcoma (Codman triangle sunburst appearance) + Osteochondroma (most common benign) - Metaphysis
- ✓ Ewing sarcoma (onion skin) - Diaphysis
- ✓ Osteoblastoma occurs in - Vertebrae
- ✓ Osteoid osteoma - Cortex of long bones + Has radiolucent osteoid core

Q49. How are cystoscopes and endoscopes sterilized?

A. Isopropyl alcohol
B. Autoclaving
C. Tyndilization
D. Chlorhexidine

Ans. C

Q50. Which type of myosin subunits are present on cardiac cell?

A. Alpha isomer
B. Beta
C. Delta
D. Alpha and beta isomer

Ans. B > D

Also remember:

Q. Which type of myosin subunits is present in skeletal muscle?

A. Alpha isomer
B. Beta
C. Delta
D. Alpha and delta isomer

Ans. B

Q51. A patient is having bleeding problem lab shows PT 14sec, Aptt 60 sec (prolonged) bleeding time 6mins, defect in which of following pathway?

A- Extrinsic pathway
B- Intrinsic pathway
C- Platelet function
D- Platelet Retraction
E- Blood Propagation

Ans: B (FA +Guyton)

It is very important to memorize the normal values of PT, aPTT and BT as the normal range is not given in exam.

LABORATORY TEST	COMPONENTS MEASURED	NORMAL VALUES
Bleeding time	platelet function vascular integrity	3 - 10 mins
PT	I, II, V, VII, IX, X	12 - 14 secs
PTT	I, II, V, VIII, IX, X, XI, XII	24 - 35 secs

Explanation:

- APTT raised only – Hemophilia (intrinsic pathway)
- APTT and BT raised – VWBD (intrinsic pathway)
- All 3 raised – DIC
- Only BT raised – ITP (Low platelets) or Platelets function defect (platelets count normal)
- Heparin monitoring is done by – APTT (intrinsic pathway)

- Warfarin monitoring is – INR > PT (extrinsic pathway)

Q52. A patient is on IV heparin therapy, how will you monitor her?

A. APTT
B. PT
C. BT
D. INR

Ans. A

Remember:

- Heparin monitoring is done by – APTT (intrinsic pathway)
- Warfarin monitoring is – INR > PT (extrinsic pathway)

Q53. Pain in mumps is transmitted by which nerve?

A. Greater auricular nerve
B. Auriculotemporal nerve
C. Facial nerve
D. Glossopharyngeal Nerve

Ans. A

Q54. Which of the following is the most common complication of mumps in children?

A. Orchitis
B. Conjunctivitis
C. Meningoencephalitis
D. Myocarditis

Ans. C (but in adults the common complication is orchitis)

Q55. A lady presented with fever and jaw abscess with draining sinus and yellow granules. Causative organism is:

A- Staph Aureus
B- Actinomyces
C- Pseudomonas
D- Treponema
E- Proteus

Ans: B

(If not in options choose staph aureus. If asked about yellow vaginal discharge choose trichomonas vaginalis)

Q56. Which of the following is an organism that produces fluorescent pigments and is resistant to antibiotics?

A. Staphylococcus
B. Streptococcus
C. Actinomyces
D. Pseudomonas

Ans. D

Q57. The deficiency of bile salts after ileal resection can cause which of the following?

A. Decreased micelle formation
B. Secretory diarrhea
C. Delayed wound healing
D. Increased micelle formation

Ans. A (osmotic diarrhea will occur)

Q58. A patient presented with paralysis of right limb and right lower face along with homonymous hemianopia, lesion is present in which of following?

A- Basilar pons
B- Forebrain
C- Midbrain
D- Medulla
E- Thalamus

Ans: B

Q59. The infundibulum of pituitary gland is related to:

A. Pars distalis
B. Pars tuberalis
C. Pars nervosa

Ans. B

Q60. Which type of collagen is present in basement membrane?

A. Type 1
B. Type 2
C. Type 3
D. Type 4

Ans. D

Mnemonic:
Be So Totally Cool, Read Books.
Where,
Type 1: **Bone**, **Skin**, and **Tendon**.
Type 2: **Cartilage**.
Type 3: **Reticulin**, and **Blood vessels**.
Type 4: **Basement membrane**.

Another Mnemonic:
Type **one** (1) = **Bone**
Type **two** (2) = Car**TWO**lage (cartilage)
Type **four** (4) = **floor** (basement membrane)

Q61. Final wound strengthening is done by which type of collagen?

A- Type 3
B- Type 1
C- Type 4
D- Type 2

Ans: B

Explanation:

- Early wound healing + granulation tissue – Type 3 collagen
- Late wound healing + wound strength – Type 1 collagen

Q62. A student examined biopsy slide and noticed there was increased basophilia, which structure could it be? (poor recall)

A. Thymus
B. Adrenal cortex
C. Liver

Ans. A

Q63. A 17 year boy is brought to the hospital, in an altered sensorium. He is taking slow, shallow breaths and His breath has a fruity smell. An ABG: pH=7.20, urine ketones +ve. What is the most likely cause?

A- HONK
B- DKA
C- Septic
D- RTA

Ans. B

Q64. A patient presented with episodic hypertension, headache, diaphoresis & palpitations and diagnosed as pheochromocytoma, which of the following will be less in the blood on lab report:

A- Pyruvate
B- Lactate
C- Fasting glucose
D- Insulin
E- Fatty acid

Ans: D

Explanation:

In pheochromocytoma catecholamine increase which act on Alpha 2 receptor thus decrease insulin and cause increase glucose.

Please also note the following recurring MCQs related to pheochromocytoma:

Q65. A patient is having Palpitation and episodic headache and diagnosed with pheochromocytoma on investigation epinephrine metabolites are increased. Epinephrine influences carbohydrate metabolism by which mechanism?

A- Increased glycolysis
B- Increased gluconeogenesis
C- Increased glycogenolysis
D- Decrease glycogenolysis
E- Decrease glycolysis

Ans: C

Q66. A patient presented with episodic hypertension, headache, diaphoresis & palpitations which medullary tumor can be the cause?

A- Pheochromocytoma
B- CRF
C- Adrenal Tumour
D- Renal Cell Carcinoma
E- Medullary Adenoma

Ans: A

Explanation:

The classic triad of pheochromocytoma is headache, diaphoresis and palpitations though only 40% individuals present with these symptoms.

Q67. A 2 year old child was diagnosed with bronchiolitis, which of the following organisms can be the causative agent?

A. RSV
B. Influenza
C. Streptococcus
D. EBV

Ans. A

(If it is written that child is negative for RSV then choose influenza)

Q68. Marathon runner in July feels weakness unattentive and collapsing. He is sweating profusely. Which of the following is the cause?

A- Heat stroke
B- Dehydration
C- Hypokalemia
D- Hyperkalemia
E- Cerebral concussion

Ans: B

Explanation:

- No Sweating + Collapse – Heat Stroke
- Sweating + Collapse – Heat Exhaustion > Dehydration

Q69. During LP in which spaces the needle is inserted:

A. Subarachnoid space
B. Interlaminar space
C. Ligamentum teres
D. Choroid plexus

Ans. A

Q70. Which of the following is locally malignant tumor?

A- Melanoma
B- Squamous Cell Carcinoma
C- Ambleoblastoma
D- Adenoid cystic carcinoma
E- Hemartoma
Ans: C (But remember BCC > Ambleoblastoma)

Q71. Edema in nephrotic syndrome is due to:
A- Salt and water retention
B- Hypoalbuminemia
C- Increase hydrostatic pressure
D- Increase oncotic pressure
E- Portal HTN
Ans: B
Explanation:
- Peripheral edema in CLD due to – Loss of albumin (Low oncotic pressure)
- Ascities in CLD due to – Portal HTN
- Renal origin Edema due to – Loss of albumin (Low oncotic pressure) + Can be salt and water retention.
- Nephrotic syndrome edema due to – Hypoalbuminemia
- Nephritis Syndrome edema due to – Salt and water retension
- Pedal edema in CHF and HTN due to – Increase hydrostatic pressure
- In CHF edema woarsen by – Sodium and water retention

Q72. Most common dietary factor of oesophageal SCC is:
A- Nitrosamines
B- Alcohol
C- Chronic irritation
D- Smoking
E- Arsenic
Ans: A

Q73. Which of the following is the antidote of paracetamol?
A. Naloxone
B. Digoxin
C. Bicarbonate
D. N – acetylcysteine
Ans. D

Q74. Nucleus tractus solitarius contain which of following?
A- First order neuron of taste pathway
B- Body of 2nd order neuron of taste pathway
C- 2nd order neuron of auditory pathway
D- 3rd order neuron of taste pathway
E- 2nd order neuron of visual pathway
Ans: B

Q75. Kayser-Fleischer ring is seen in:
A. Wilson disease
B. Primary Biliary Cirrhosis
C. Primary Sclerosing Cholangitis
D. All
Ans. A

Q76. A patient having Tachycardia abdominal distension and hypotension after laparotomy due to which of these?
A- Hypovolemic Shock
B- Septic Shock
C- Cardiogenic Shock
D- Anaphylactic Shock
E- Neurogenic Shock
Ans: A

Q77. Which of the following contains highest saturation of unsaturated fatty acids?
A. Soup
B. Almond
C. Sunflower seed
D. Soya bean oil
Ans. D
Remember:
- ✓ Highest Quantity of Unsaturated Fatty Acid – Sun Flower
- ✓ Highest Quality of Unsaturated Fatty Acid – Soya Bean

Q78. Which of the following is the most important thing a person can do for effective weight loss?
A. Self punishment
B. Self reward
C. Self monitoring
D. None of the above
Ans. C

Q79. A patient presents Short limb, normal trunk and lumbar lordosis the mode of inheritance of this disease is:
A- X Link Recessive
B- X Link Dominant
C- Autosomal Recessive
D- Multifactorial
E- Autosomal Dominant
Ans: E (Achondroplasia)
The inheritance patterns of the following diseases have been frequently asked:

Autosomal dominant	Autosomal recessive	X linked disorders
Achondroplasia	Cystic fibrosis	Hemophilia
vWD	Alpha 1 antitrypsin deficiency (emphysema)	G6PD deficiency
Adult polycystic kidney disease	Child polycystic kidney disease	Duchenne muscular dystrophy
Huntington's disease	Beta thalassemia	Colour blindness
Hereditary spherocytosis	Sickle cell anemia	
Osteogenesis imperfect	Wilson's disease	
Myotonic dystrophy		
Familial adenomatous polyposis (FAP)		
Ehler's danlos		
Retinoblastoma		

Remember:

A general rule of thumb is that –

- If the disease produces structural changes then it is usually (not always) Autosomal Dominant e.g. Achondroplasia
- If the disease is due to enzymatic defect then it is USUALLY (not always) Autosomal Recessive e.g. alpha 1 antitrypsin deficiency
- If the disease is ONLY inherited by male children then it is X linked recessive e.g. DMD

Q80. In a patient loss of proprioception occurs after RTA, what is underlying mechanism?

A- Lateral Column lesion
B- Lateral Inhibition
C- Posterior inhibition
D- Field Blockage
E- Anterior Inhibition

Ans: B

Explanation:

- Loss of proprioception lesion in – Posterior column (DCML)
- Loss of proprioception mechanism is – Lateral inhibition (Guyton)

Q81. A 16-year-old female presents with hypertension and increasing weight. Which of the following features would be most suggestive of Cushing's syndrome rather than simple obesity?

A- Abdominal striae
B- Acanthosis nigricans
C- Buffalo hump (interscapular fat pad)
D- Pot belly
E- Amenorrhea

Ans: A (Prefer Proximal myopathy)

Q82. In extremely cold weather with temperatures below freezing point a woman has cough, which receptors involved?

A- Peripheral chemoreceptors
B- Stretch receptors
C- Nociceptors
D- Central chemoreceptors
E- Irritant receptors

Ans: E

Q83. Pregnant lady delivered a baby after parturition regression of uterus is done by which of these?

A- Mitochondria
B- Lysosomes
C- Golgi apparatus
D- Ribosomes
E- Endoplasmic reticulum

Ans: B

Q84. Which of the following is the term used for the essential components of food that are absorbed by human beings?

A. Nutrients
B. Cereals
C. Amino acids
D. Lipids

Ans. A

Q85. Which of the following serves as a buffer in a patient diagnosed with Diabetic Ketoacidosis?

A. Phosphate
B. Blood
C. Bicarbonate
D. Ammonia

Ans. C

Remember:

- Major blood / Extracellular / Interstitium / Plasma Buffer – Bicarbonate
- Major RBCs buffer – Hemoglobin
- Major Intracellular Buffer – Proteins
- Major Renal Buffer – Phosphate
- Exclusive Renal tubular buffer –Ammonia
- Major urinary buffer (quantitatively) - Ammonium
- Major bone buffer - Calcium carbonate

Q86. Which of the following test to be done for typhoid fever during the first week?

A- Urine culture
B- Blood Culture
C- Antibody Test
D- Stool Culture
E- Biopsy of Marrow

Ans: B

Explanation:

BASU

- Blood Culture – 1st week
- Agglutination Test (Widal test) and blood culture (CPSP key) – 2nd week
- Stool culture – 3rd week
- Urine culture – 4th week

Q87. Most important factor in negative feedback is?

A- Release of Hormone
B- To bring value to normal limit
C- Feed forward mechanism
D- Release Enzyme

Ans: B

Q88. Which of the following can be the reason people with Type A personality develop cardiac issues more frequently than the rest of the population?

A. Genetic predisposition
B. Longevity
C. Stress
D. All

Ans. C

Q89. A patient having alternative diarrhea and constipation habits and per rectal bleeding diagnosed as a case of colon cancer which is the tumor marker?

A- Alpha fetoprotein
B- CEA
C- CA-125
D- BRCA -2
E- CA 19-9

Ans: B

Q90. AFP protein associated with which of following malignancy in children?

A- HCC
B- SCC
C- CA Colon
D- RCC
E- Adenocarcinoma

Ans: A

Important Tumour Markers	
HCG	Hydratidiform mole Choriocarcinoma
Alkaline phosphatase	Seminoma
Calcitonin	Medullary thyroid CA
Urinary catecholamines (like VMA)	Pheochromocytoma
Alpha fetoprotein	Yolk sac tumour HCC
PSA	Prostate cancer
CEA	Colorectal CA
CA 15-3	Breast CA
CA 19-9	Pancreatic adenocarcinoma
S100	Malignant melanoma

Q91. An old patient presented with fatigue weakness and dyspnea with labs showing decreased calcium level, increased phosphate level, raised creatinine and increased PTH is a case of:

A- Acute renal failure
B- Renal tubular acidosis
C- CRF
D- RCC
E- HCC

Ans: C

Q92. A patient took antituberculous therapy for 2 months, but now he has presented with increased ESR. What could be the cause?

A. Superadded bacterial infection
B. Wrong diagnosis
C. Patient did not take ATT long enough
D. None of the above

Ans. A

Q93. In which of the following diseases "ineffective erythropoiesis" is the underlying pathophysiology?

A. Malaria
B. Dengue
C. Thalassemia
D. Thrombocytopenia

Ans. C

Q94. A chronic smoker presents to you with the complain of non healing ulcer on the inner margin of lower lip. Which type of carcinoma this patient can develop?

A. Adenocarcinoma
B. BCC
C. SCC
D. Lekuemia

Ans. C

Remember:

- Hairy leukoplakia – Associated with HIV and caused by EBV
- Oral ulcer, patient on dialysis, cause is – Vit B6 def > Vit B12 def
- How to differentiate b/w patches of oral leukoplakia and oral candidiasis – Patches of leukoplakia CANNOT be scraped off unlike candidiasis

Q95. Which of the following antibodies is found in colostrum?

A. IgA
B. IgE
C. IgM
D. IgG

Ans. A

IgE	IgA	IgM	IgG
Lowest in serum	Colostrum/ Breast milk	Largest antibody (pentamer)	Smallest antibody
Allergies	Secreted in mucus, saliva, tears	Cold antibody	Warm antibody (G for garmi)
Binds basophils and mast cells		First to rise in an infection	Long term memory immunoglobulin (released against previously exposed antigen)
		Involved in complement fixation	Opsonization
		Pentamer with 10 oxygen binding sites	Most abundant immunoglobulin in adults
		If present in maternal serum in rubella infection, it is an indication of termination of pregnancy	Autoimmune pancreatitis occurs due to IgG
		CANNOT cross placenta	Can cross placenta

Q96. Best route of giving antidote is:

A- Oral
B- Sublingual
C- IV
D- IM
E- Rectal

Ans: C

Q97. How is depolarization from beginning of P wave to the beginning of QRS complex represented on ECG?

A. PR Interval
B. PR Segment
C. QRS Complex
D. PQ Interval

Ans. A

Note: The PR segment is the flat line between the end of the P-wave and the start of the QRS complex. Don't mix PR segment and PR interval!

Q98. Which of the following patients show predisposition to invasive fungal sinusitis?

A. Acute renal failure
B. Cushing's disease

C. Diabetics
D. None of the above

Ans. C

Q99. A patient presented to you with ophthalmoplegia and headache. He has history of furuncle on nose and cavernous thrombophlebitis is being suspected. The route of spread up to cavernous sinus is via:

A. Superior ophthalmic vein
B. Superior ophthalmic artery
C. Abducent nerve
D. Facial nerve

Ans. A

Q100. An old man woke up in the middle of night with acute pain and tenderness in knee. He has low grade fever, knee joint fluid analysis shows leukocyte 70,000 with 75% neutrophils, crystal analyses shows negative birefringent crystals and gram stain is negative. What could be the diagnosis?

A. Gout
B. Septic arthritis
C. Ankylosing spondylitis
D. Reiter's arthritis

Ans. A

Q101. Microscopic slide of liver shows portal vein hepatic artery and bile duct at periphery and central vein in center:

A. Hepatic lobule
B. Portal acinus
C. Hepatic acinus

Ans. A

Please clarify your concepts with the following diagram, as sometimes the statement is changed.

Q102. Which of the following organisms is a common gram negative rod that causes UTI?

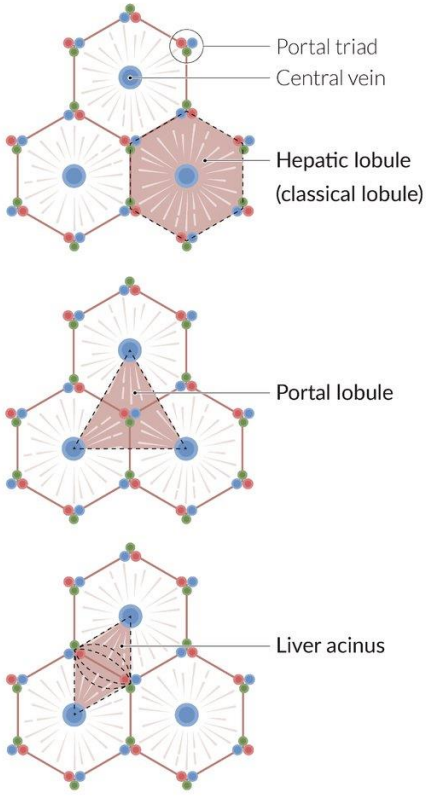
A. Pseudomonas
B. Staphylococcus
C. Streptococcus
D. Escherichia Coli

Ans. D

Q103. A boy presented with fever hypotension and rash all iver body and extremeties he also gave history of abdominal pain and vomiting likely cause is:

A. Endotoxin
B. Exotoxin
C. Erythrogenic toxin
D. Enterotoxin

Ans. C (Scarlet fever caused by Strep Pyogenes)



Q104. Breast tumour (T3N2M0) what stage does this represent?

A. Stage llA
B. Stage llB
C. Stage lll
D. Stage IV

Ans. C

Q105. Blood supply control of which organ is under sympathetic system rather than local metabolites?

A- Skin
B- Skeleton muscle
C- Kidney
D- Brain

Ans: A

Q106. In which organ blood is maintained early by sympathetic system then by local metabolites?

A- Brain
B- Heart

C- Skin
D- Exercising muscle

Ans. D

Q107. Burkitt's lymphoma is associated with mutation of the following gene?
A) BCL-6 gene
B) BCR-ABL gene
C) Cyclin D gene
D) myc gene
E) RAR-alpha gene

Ans. D

Q108. The most radiosensitive organ in female reproductive system is:
A. Cervix
B. Fallopian
C. Ovary
D. Vagina

Ans. C

Remember:

Regarding Radio sensitivity

- **Lymphoma > Seminoma > glioma > craniopharyngioma**
- **Most Radiosensitive Testicular Tumor - Seminoma**
- **Most Radiosensitive Ovarian Tumor – Dysgerminoma**
- **Most radiosensitive lung tumor –Small Cell CA**
- **Most radiosensitive bone tumor - Multiple myeloma and Ewing sarcoma**
- **Most radiosensitive renal tumor – Wilms Tumors**
- **Most radiosensitive brain tumor – Medulloblastoma**
- **Least radio sensitive blood cell – Platelets**
- **Most radio sensitive organ – Skin**
- **Least radio sensitive organ – Vagina**
- **Most radio sensitive mucosa – Intestinal**
- **Radiation induced brain malignancy – Meningioma**
- **Overall radiation induced CA – Leukemia**

Q109. Which of the following electrolyte abnormality can cause hyper excitability of nerves?
A. Hypocalcemia
B. Hypercalcemia
C. Hyperkalemia
D. Hypernatremia

Ans. A (Tetany)

Q110. If magnesium levels are > 10meq (hypermagnesemia), this can cause:
A. Decreased Acetylcholine (if asked ECG changes then prolong PR interval)
B. Hyperreflexia
C. Increase acetylcholine release
D. Convulsion

Ans. A

Q111. Histology of gastric parietal cells:
A. Granular cytoplasm with central nucleus
B. Clear cytoplasm with basal nucleus
C. Squamous cells
D. Cuboidal epithelium

Ans. A (Granular cytoplasm of these cells is due to abundance of mitochondria, they are pyramidal in shape.)

Q112. 70-year-old women fallen from bed and femur was fractured, radiograph shows signs of osteoporosis. What is the probable cause?
A- Diminished Blood Supply
B- Decrease Endocrine Activity
C- Disuse Atrophy
D- Decrease Nutrition

Ans: B

Q113. Most common cause of pyogenic lung abscess:
A- Staph Aureus
B- E.Coli
C- Streptococcus Pneumoniae
D- Klebsiella
E- H influenza

Ans: A

Q114. Goblet cell is:
A. Modified simple cuboidal
B. Modified simple squamous
C. Transitional
D. Modified simple stratified
E. Modified simple columnar

Ans. E

Q115. 45 year old man came with lymphadenopathy, the place from where he came an epidemic of a disease where rat flea is the vector. On microscopy the organism is gram negative with safety pin appearance. What could it be?
A. Yersenia pestis

B. Klebsiella
C. Coxiella

Ans. A

Q116. Grading of carcinoma shows:
A- Dysplasia
B- Permeability to basement membrane
C- Invasion
D- Type of the cell

Ans: D

Explanation:

- Grading – Nuclear differentiation / degree of differentiation / Mitosis/Type of Cell
- Staging – Extent of spread / Lymph nodes involvement

Q117. Type of change in metaplasia is:
A- Polarity change
B- Irreversible change
C- Necrotic change
D- Functional and morphological change
E- Apoptotic

Ans: D

Q118. Which translocation is seen in acute promyelocytic leukemia?

Ans. 15:17 translocation

Explanation:

- AML – 8:21 and 15:17
- CML – 9:22
- Burkit Lymphoma – 8:14
- Mantle Cell Lymphoma – 11:14
- Follicular Lymphoma – 14:18
- Ewing Sarcoma – 11:22
- Prostatic Carcinoma – 7:21 and 17:21
- Parachute cells - CLL

Q119. A patient with sore throat, fever, lymphadenopathy. EBV was detected, he's at risk of which of following?
A- Burkitt's lymphoma
B- Kaposi Sarcoma
C- Multiple myeloma
D- Wilms Tumor

Ans: A

Q120. A 55-year-old man complains of a rash he has had for many months. It occasionally itches. While he has tried some topical over-the-counter steroids, he has not seen his dermatologist yet since the symptoms were mild. On physical exam, his legs are covered with multiple well-demarcated red papules and plaques with some telangiectasia. A skin biopsy is obtained. A week later, the biopsy comes back with Pautrier microabsecesses, atypical T cell lymphocytic infiltrate, and cells with cerebriform nuclei. Histopathology confirms CD 30+ cells and skin infiltration by neoplastic T lymphocytes. What is this disease?
A. Hodgkin's disease
B. Mycosis fungoides
C. Burkitt's lymphoma
D. ALL
E. Hairy cell leukemia

Ans. B

Remember:

Mycosis fungoides is an extranodal Non-Hodgkin's lymphoma of T cell origin with primary involvement of skin
Also called "sezary syndrome"
Atypical T cells (Sezary cells) in peripheral blood

Q121. Lipid and protein present in:
A- Golgi apparatus
B- Endoplasmic reticulum membrane
C- Nuclear membrane
D- Cell membrane

Ans. D

Q122. If carbohydrate is removed from protein, this will result in:
A- Elimination
B- Storage
C- Proteolysis
D- Aggregation and precipitation

Ans. D

Q123. What is true about drug receptors?
A- Only activated by drugs
B- Protein in nature
C- Lipid in nature
D- Cholesterol in nature

Ans. B

Q124. Schwann cell homologue in CNS is called?
A- Oligodendrocytes
B- Ependymal cell
C- Microglilal cell

Ans. A

Q125. Relation of 3rd ventricle:
A- Posteriorly to lamina terminalis

B- Posteriorly related to subthalamus

Ans. A

Q126. Regarding 3rd ventricle:

A. Posterior to lamina terminalis
B. Posteriorly related to subthalamus

Ans. B

Q127. A patient presented with left sided limb paralysis, paralysis of right lower face and homonymous hemiplegia. Lesion is present in:

A- Basilar pons
B- Forebrain
C- Midbrain
D- Thalamus
E- Medulla

Ans. B

Q128. Memory center is located in:

A. Insula
B. Parietal lobe
C. Temporal lobe
D. Frontal lobe

Ans. C

Q129. Olfactory area is present in:

A- Anterior perforating material
B- Occipital lobe
C- Inferior temporal gyrus
D- Parietal lobe

Ans: A

Explanation:

- Olfactory Cortex location – Posterior inferior Temporal Lobe + Uncus
- Olfactory Area location – Anterior Perforating Substance

Q130. True about adrenal gland:

A. Passes infront of IVC on both sides
B. Supplied by sympathetic thoracic plexus

Ans. B

Also know:

Q. True regarding suprarenal gland arterial supply:

a. Receives all branches directly from aorta
b. Receives blood from 3 sources
c. Receives blood from both renal arteries
d. Receives blood from inferior phrenic artery

Ans. B

Q. Among the following which is false regarding adrenal glands?

a. Have direct supply from aorta
b. 3 sources of blood supply
c. Blood supply is from phrenic artery
d. Blood supply is from renal artery

Ans. B

Q. About right adrenal gland, choose correct:

a. Has same size in adults and infants
b. Has 3 arterial supply
c. Pyramidal in shape

Ans. C

Q. About kidney:

a. Renal vein lies anterior to renal artery and posterior to renal pelvis
b. Covered by fascial sheath along with adrenal gland
c. Hilum at L4
d. Covered by fascial sheath without adrenal gland

Ans. A & B are both correct. In this case B>A

Q131. What is not true about adrenal gland?

A. Fetal gland is 1/3rd size of adult gland
B. It is invested by renal fascia
C. Adrenal cortex is derived by mesoderm
D. Right adrenal gland is pyramidal

Ans. A

Q132. A 12-year-old boy is brought to the emergency room for cough, high fever, and rash. He also reports having itchy eyes for the past day. The rash started on his head and neck and traveled downward towards his trunk. His vaccination history is unknown. On physical exam, he has a confluent maculopapular rash that is blanching with pressure. There are blue-white macules overlying a background of erythema on the buccal mucosa. On biopsy of lymph node warthin finkeldey giant cells are seen. The diagnosis is:

A. Measles
B. Coxsackie
C. Mumps
D. Chickenpox

Ans. A (pneumonia due to measles)

Q133. 12 years old Afghan boy came with fever night sweats on right side neck discharging sinus and cervical lymphadenopathy. No growth revealed on blood culture which next confirmatory test should be done?

A- ZN staining
B- Lymph node Biopsy
C- Mycobacterium culture
D- Mycobacterium antibody
E- Blood culture
Ans: B

Q134. Which of the following is an "acid fast bacillus"? (TB was not in the options according to recalls):
A. **Nocardia**
B. **Staphylococcus**
C. **E. coli**
Ans. A

Acid Fast Organisms are:
a. Legionella
b. Mycobacteria
c. Nocardia
d. Isospora
e. Cryptosporidium
f. Rhodococcus
g. Brucella

Q135. After abdominal surgery, a woman came to you with discharging sinus from site of suture. On microscopy, yellow colour granules were seen. Causative organism?
A. Staph Aureus
B. Actinomyces
C. Pseudomonas
D. Treponema
E. Proteus
Ans: B

Q136. Serological test will be best for diagnosis of:
A- Gonococcus
B- Q fever
C- Pneumonia
Ans. B

Q137. A child came to you with sudden pain in joints and was diagnosed with osteoarthritis. Most common organism?
A- S viridans
B- Coxiella
C- Legionella
D- S Aureus
Ans. D

Q138. A CRF patient on long term dialysis died on autopsy findings will be:
A- Thyroid Atrophy
B- Thyroid hyperplasia
C- Parathyroid Hyperplasia
D- Heart Atrophy
E- Adrenal enlargement
Ans: C

Q139. A 13 year old boy presented to you with sudden bone pain. O/E he has hepatomegaly, splenomegaly and positive family history of this disease. Diagnosis:
A- G6PD
B- Sickle cell
C- Hereditary spherocytosis
Ans. B

Q140. Massive splenomegaly is seen in:
A. CML
B. AML
C. CLL
D. ALL
Ans. A

Q141. Massive splenomegaly occurs in:
A. Leishmaniasis
B. Chronic malaria
Ans. A

Q142. Cause of massive splenomegaly:
a. Hairy cell leukemia
b. Thalassemia major
c. Infectious mononucleosis
d. All of the above
Ans. A
(IM does cause splenomegaly but not massive)

Q143. Massive splenomegaly and lymphatic obstruction:
A. Chronic malaria
B. Leishmaniasis
Ans. B

Q144. Patient with history of high grade fever with chills once in past, now he has massive splenomegaly and IgE levels are high. Cause:
A. Malaria
B. Leishmanias
Ans. B

Q145. Patient present with symptoms of gastric pain and bowel disturbance gastrectomy done after that patient complain of tingling sensations you suspect deficiency of vitamin B12 how will you confirm the Diagnosis:
A- B12 level

B- CBC
C- Anti intrinsic factor antibodies
D- USG abdomen
Ans: A

Q146. A 24 years old lady who is 6 months pregnant complains of generalized weakness and lethargy her Hb is 9.8 g/dl with MCV 58 fl and MCH 15 pg her serum ferritin level is 150 mg /dl diagnose is?
A- Anemia of chronic disease
B- Iron deficiency anemia
C- Thalassemia trait
D- Megaloblastic anemia
E- Sideroblastic anemia
Ans: C
Explanation:
- Thalassemia trait – MCV low + Ferritin normal
- Iron deficiency – MCV low + Ferritin low

Q147. A 35 year old patient develops amenorrhea after 3 weeks of third delivery cause:
A. Pituitary adenoma
B. Pituitary necrosis
Ans. B

Q148. Patient came with burn what the initial thing is done to prevent wound contraction and scaring?
A. IV glucocorticoids
B. Skin graft
C. UV light
Ans. B

Q149. Supporting cells of pars nervosa include:
A- Kuffer cells
B- Pituicytes
C- Astrocytes
D- Glial cells
E- Oligodendrocytes
Ans: B

Q150. Which receive input from hypophysial portal system?
A- Adenohypophysis
B- Neurohypophysis
C- Pars distalis
D- Pars tuberalis
E- Para nervosa
Ans: A

Q151. Bacteria are killed in:
A. Peroxisome
B. Lysosome
Ans. A

Q152. Which of the following vitamins is needed as a cofactor for co-enzyme A and as a carrier of 1 carbon fragments during various levels of oxidation?
A- Vitamin B1
B- Vitamin B7
C- Vitamin B6
D- Vitamin B12
E- Vitamin C
Ans: B (FA)
Explanation:
- ✓ B1 Deficiency – Dry Beri beri, Wet Beri beri, Wernicke korsakoff Measured by Transketolase activity
- ✓ B2 deficiency – Corneal vascularization and chielosis
- ✓ B3 deficiency – Pellagra (diarrhea, dementia, dermatitis)
- ✓ B5 required – Co factor for Co-enzyme A
- ✓ B5 deficiency – Adrenal insufficiency
- ✓ B7 (Biotin) – Bind avidin in egg and carrier of one carbon
- ✓ B7 – Role in liver metabolism
- ✓ B9 (folic acid) – One carbon transfer
- ✓ B9 deficiency – NTD
- ✓ B12 deficiency – Megaloblastic anemia

Q153. A patient eating raw and undercooked meat will have which of the following?
A. Taenia Spiralis
B. Tape worm
C. Hookworm
Ans. B (If pork is specified then choose A)

Q154. Farmers lung is caused by:
A. Grain dust
B. Pesticide
Ans. A

Q155. A person working in cotton industry, is at risk of developing:
A- Farmers lungs
B- Byssinosis
C- Baggasosis
D- Silicosis
Ans: B

Q156. Most important buffer in plasma:
A- HCO_3
B- HB
C- Protein

D- Ammonia
E- CO_2
Ans: A
Explanation:
- Major blood / Extracellular / Interstitium / Plasma Buffer – Bicarbonate
- Major RBCs buffer – Hemoglobin
- Major Intracellular Buffer – Proteins
- Major Renal Buffer – Phosphate
- Exclusive Renal tubular buffer – Ammonia
- Major urinary buffer (quantitatively) – Ammonium
- Major bone buffer – Calcium carbonate

Q157. Patient came with of skin rash and urticaria history of diphtheria vaccine few days' back type of hypersensitivity will be:
A- Type 1
B- Type 2
C- Type 3
D- Type 4
E- Type 1+2
Ans: C
Q158. Xenograft means:
A. Graft from identical twin
B. Graft from other species
Ans. B
Q159. Graft rejection after 6 month:
A. Acute cellular rejection
B. Hyper acute rejection
C. Chronic rejection
Answer:
✓ Graft rejection after 6months = chronic rejection.
✓ Graft rejection after 6months which resolve by immune suppressants = acute cellular
Q160. Tumor suppressing the anterior surface of SCM vessel engorged will be:
A- IJV
B- EJV
C- Subclavian
D- Vagus nerve
E- Long thoracic nerve
Ans: B
Q161. Thyroid moves with swallowing due to which of following:
A- Prevertebral fascia
B- Pretracheal fascia
C- Subcutaneous fat
D- Muscles
E- Cartilage
Ans: B
Q162. A 30-year-old man has symptoms of persistent reflux esophagitis (GERD). Esophageal biopsy revealed columnar lining with intestinal metaplasia this patient has increased risk of developing:
A- Adenocarcinoma Stomach
B- Adenocarcinoma Esophagus
C- Squamous cell CA of esophagus
D- Adenocarcinoma of Trachea
Ans: B
Q163. Patient came 90pack a year typical lung carcinoma squamous cell ca scenario will spread through:
A. Lymphatics
B. Blood
Ans. A
Q164. AFP protein associated with which of following malignancy in children?
A- HCC
B- SCC
C- CA Colon
D- RCC
E- Adenocarcinoma
Ans: A
Q165. Asbestosis is related to which of the following?
A- Kidney Cancer
B- Malignant Mesothelioma
C- Endothelial cancer
D- Bladder Cancer
E- Liver CA
Ans: B
Explanation:
- Smoking >Radon >Asbestose – Lung CA
- Asbestose cause – Lung CA > Mesothelioma

Q166. Bladder cancer in a chemical industry worker due to:
A- Vinyl chloride
B- Aryl amines
C- Irritation
D- Arsenic
E- Vinyl chloride
Ans: B
Q167. Ovarian cancer spread by which route?
A- Direct spread

B- Peritoneal cavity
C- Pleural cavity
D- Inguinal nodes
E- Fallopian tubes

Ans: B

Also know:

Q. Which of the following tumor spread through haematogemous route most commonly?
A. Small cell ca lungs
B. Medullary ca thyroid
C. Oat cell ca lungs
D. Endometrial carcinoma
E. Intraductal breast ca

Ans. D

Q. An old diabetic lady diagnosed with moderately differentiated endometrial carcinoma. The most common pattern of spread is:
A. Lymphatic
B. Direct extension to the adjacent structures
C. Exfoliation of malignant cells via the fallopian tubes
D. Haematogenous spread

Ans. B

"Almost all carcinomas preferentially spread through lymphatics except renal cell carcinoma it spreads through veins"

Q. Medullary carcinoma of thyroid spread preferentially by which route?
A. Nerve
B. Veins
C. Lymphatics
D. Local
E. Artery

Ans. C (Lymphatic spread is more common than hematogenous spread)

Q. Following tumours spread by haemotogenous route:
A. Glioma
B. Renal cell CA
C. CA prostate

Ans. B

Q168. Most common route of metastasis of Renal Cell Carcinoma:
A. Renal artery
B. Direct spread of adjacent viscera
C. Renal vein
D. Lymphatic spread
E. Abdominal aorta

Ans. C

Q169. The late secretory phase of menstrual cycle is not characterized by:
A. **The spongy layer becomes thick**
B. **Corpus luteum secretes estrogen n progesterone**
C. **The endometrial thickness is doubled**
D. **Endometrial cells have subnuclear vacuolations**
E. **Endometrial glands become tortuous**

Ans. D

Histologic features of secretory phase

Early secretory phase → sub nuclear vacuoles + epithelial mitosis

Mid secretory phase → Supranuclear vacuoles + serrated glandular configuration + periarteriolar predecidual reaction

Late secretory phase → Desidualisation extend from the surface to the deeper stroma

Q170. Histology of uterus with coiled and tortuous glands and blood vessels:
A. Late proliferative phase
B. Early proliferative phase
C. Late secretory
D. Early secretory case

Ans. C

Q171. A histological section of a gland shows many acini lined with pseudostratified columnar epithelium embedded in stroma, with smooth muscle in it. Which gland is this?
A- Prostate gland
B- Parotid gland
C- Submandibular gland
D- Seminal vesicle
E- Lacrimal gland

Ans: A (Fibromuscular stroma for prostate)

Q172. A 40 year old alcoholic male patient, having raised labs of ALP, serum bilirubin, ALT was raised twice than normal &GGT was raised 6 times than normal, So what will be seen on microscopically examination of the liver?
A- Piecemeal necrosis
B- Mallory bodies
C- Periportal fibrosis
D- Lymphocytosis

Ans: A

Q173. A patient with Sarcoma of thigh receives radiotherapy for after 6 months he develops scaring & fibrosis of the skin it is due to which of following?

A- Endarteritis Obliterans
B- Desquamation
C- Venous thrombosis
D- Infection
E- Inflammation

Ans: A

Explanation:

- Acute effect of radiotherapy – Desquamation
- Chronic effect of radiotherapy – Endarteritis obliterans
- Late effect of radiotherapy – Lymph proliferative disorder

Q174. Most important prerequisite for renal transplant:

A. HLA testing
B. ABO compatibility
C. T cell count

Ans. A

Remember:

- ✓ Important Test For Transplant – HLA typing
- ✓ Best Blood Cell for HLA Sampling– WBC
- ✓ Best Site for HLA Sampling – Bucal Mucosa
- ✓ Best Tissue for HLA Sampling – Bone marrow

Q175. Regarding pharmacokinetics true is:

A- Reversal of hydralazine induced tachycardia with propranolol
B- Reversal of morphine induced CNS depression with naloxone
C- Increased toxicity of methotrexate with aspirin
D- Increased peripheral side effects of levodopa with carbidopa

Ans: C

Q176. Regarding drug- drug interaction:

A- Pharmacokinetics
B- Pharmacodynamics
C- Both A and B
D- Distribution

Ans: C

Remember:

Q. Pharmacokinetics drug-drug interactions?

A. Thiazide and lithium✓
B. Morphine and naloxone
C. Procaine and adrenaline
D. Phenobarbital and warfarin

Q. Pharmacodynamics drug-drug interactions?

A. Thiazide and lithium
B. Morphine and naloxone✓
C. Procaine and adrenaline
D. Phenobarbital and warfarin

Q. Response of a body to drug is known as:

A. Pharmacodynamics
B. Pharmacokinetics✓

Q177. Epicardium is supplied by:

A- Intercostal artery
B- Coronary artery
C- Epigastric artery
D- Pericardiophernic artery

Ans: B

Remember:

- ✓ Epicardium supplied by – Coronary Artery
- ✓ Pericardium supplied by – Pericardiophrenic artery

Q178. A good doctor is recognized by:

A- Pleasant Behavior and Bedside Manners
B- Punctuality
C- Well-dressed
D- Availability to Patients

Ans: A

Q179. Medical ethics pillars include:

A- Autonomy, beneficence, justice, non-maleficence
B- Justice
C- Injustice and autonomy
D- Autonomy and beneficence

Ans: A

Q180. A 6-year-old child with history of joint swelling and bleeding during a circumcision. Raised aPTT. Which test should be done to confirm the diagnosis?

A- Factor V laden
B- Factor 9 assay
C- Factor 8 assays
D- PT

Ans: C

Q181. Recent thrombus shows presence of:

A. Calcium
B. Capillaries
C. Fibroblasts
D. Hemosiderin
E. Lines of zahn

Ans. A

Q182. Platelet aggregation by:
A. TXA2
B. Aspirin

Ans. A

Q183. Which of the following is secreted by fibroblasts?
A- Collagen
B- Hyaline
C- Amorphous Ground substance
D- Elastic

Ans: C

Explanation:
- Fibroblast Secrete – Amorphous Ground Substance
- Fibrocartilage has – Rich Collagen

Q184. Food poisoning caused by:
A. Bacillus anthracis
B. Botulinum toxin
C. H. Influenza

Ans. B

Q185. Pt. with food poisoning after eating hamburger, on microscopy /studies organism seen with motility, EMB positive metallic sheen seen, what's the organism:
A. Vibrio
B. Shigella
C. Salmonella
D. E. coli

Ans. D

Q186. Dysentery caused by which mechanism?
A. Enterotoxin
B. TSS
C. Mucosal invasion

Ans. C

Q187. A six years old girl presented with iron deficiency anaemia. She has Hb 5 Her spleen is enlarged and palpable and frontal bossing is also present. What is the cause of her illness?
A- Malaria
B- Iron deficiency Anemia
C- Thalassemia major
D- Thalassemia minor
E- Sickle cell disease

Ans: C

Q188. Howell Jolly bodies seen in:
A- Splenectomy
B- Sickle cell
C- Both A & B
D- G6PD

Ans: C

Explanation:
- ✓ Heinz Body and Bite cells in – G6PD
- ✓ Howell jowel bodies – Sickle cell and Splenectomy.

Some candidates that sickle cell anemia, spherocytosis, and splenectomy were not in options. In that case, go for thalassemia

Q189. A 2-year-old boy with h/o bleeding after trauma to knee. Factor deficient:
A. 8
B. 9
C. Vit k.

Ans. A

Q190. A scenario of pt. with fever, knee joint pain, TLC count raised, causative organism asked:
A. Staphylococcus aureus
B. Pseudomonas
C. Neisseria
D. Poor recall

Ans. A

Q191. Patient complained of abdominal pain and persistent vomiting cause is:
A- Exotoxin
B- Endotoxin
C- Enterotoxin
D- Erythrogenic toxin
E- Phagotoxin

Ans: C

Explanation:

Enteroinvasive E. coli
- Invade intestinal mucosa (Necrosis and Inflammation)
- Cause dysentry similar to Shigella

Entero Toxigenic E. coli
- Produce heat labile and heat stable enterotoxin (no inflammation or invasion)
- Cause Travelor's diarrhea

Entero Hemorrhagic E. coli
- O157:H7 is most common form

- Cause dysentery (Inflammation and necrosis)
- Shiga like toxin cause HUS (Anemia + Thrombocytopenia + AKI)
- Cause mechanical hemolysis (Schisocytes on peripheral Smear)
- Do not ferment sorbitol (Other E. coli Do)

Entero-Pathogenic E. coli

- Attach to apical surface flatten villi impair absorption
- Cause diarrhea in pediatrics

Q192. Highest Na channels in:

A. Axon hillock
B. Node of Ranvier

Ans. B

Also know:

Q. All or none phenomena occur in

A. Axon hillok
B. Node of ranvier
C. Axon

Ans. A

Q. Action potential is:

A. First generated at axon hillock
B. Axon only

Ans. A

Q193. Standard deviation measure which of following?

A- Size of sample
B- Reliability of sample
C- Variability among individual value
D- Validity of conclusion
E- Quality of experimental design

Ans: C

Q194. Regarding skeletal muscles what is true?

A- Fleshy Belly Throughout
B- Aponeurosis is Fibrous
C- Distal Insertion is Fixed
D- Origin causes Movement

Ans: A

Q195. Substantia gelatinosa transmit:

A. Vibration
B. Crude touch
C. Pain

Ans. C (slow pain)

It has type c fibers

Q196. How cortisol diff then growth hormone?

A. Inc. in surgical stress
B. Inc. in acute blood loss
C. Inc. amino acid entry in cell

Ans. A

Q197. Most common / normal structural form of DNA:

A. A form
B. B form
C. Z form

Ans. B

Q198. Tissue with dual autonomic supply but not reciprocal supply is:

A. Skin
B. Blood supply
C. Pupil
D. Salivary gland
E. Ciliary muscles

Ans. D

Q199. Chlamydia causes:

Ans: Lymphogranuloma venereum

Explanation:

Types A – C

Chronic infection and blindness

Types D – K

Urethritis/PID
Ectopic pregnancy,
Neonatal pneumonia (staccato cough) with eosinophilia
Neonatal conjunctivitis (1–2 weeks after birth)

Types L1 – L3

Lymphogranuloma venereum

Q199. Child with > 3.5g proteinuria and edema. Cause of edema:

A. Increase hydrostatic pressure
B. Decrease colloid osmotic pressure

Ans. B

Q200. Death due to food poisoning: clostridium botulinum:

If asked death due to diarrhea: Vibrio cholera

Q201. Case of woman in coma with low sodium, high glucose, high urea, high potassium, no mention of ketone bodies /fruity odor:

hyperosmolar non-ketotic acidosis (HONK)

Q202. Child with severe acute pneumonia, culture shows Warthin Finkledey giant cells:

A. CMV
B. Pneumocystis carini
C. Measles

Ans. C (Pneumonia is a common childhood complication of measles)

Q203. A lady with history of mild sore throat infection died. Autopsy report shows bilateral adrenal gland enlargement and cortical hemorrhages. Most likely organism involved:

A. Strep type A
B. Strep type B
C. Strep pneumonia
D. N. Meningitis
E. H. Influenza

Ans. D (Waterhouse Frederickson Syndrome)

Q204. Parasympathetic nerve supply of the heart:

A. Vagus nerve
B. Cardiac plexus

Ans. A

(Cardiac plexus has both sympth and parasympth fibers)

Q205. Primigravida visit to remote area AST ALT raised, jaundice she is suffering from:

A- Hep. A
B- Hep. E
C- Hep. B
D- Hep. D
E- Hep. C

Ans: B

Explanation:

- Orofecal Route – Hep. A >Hep. E
- Most lethal Hepatitis – Hep. D
- Most common in pregnancy – Hep. A
- Most lethal/Remote Area in pregnancy – Hep. E
- Most lethal/Common virus after blood transfusion – CMV >Hep. B > Hep. C
- Most common sexual spread – Hep. B HCC – Hep. B > Hep. C
- Cirrhosis – Hep. C > Hep. B Needle Stick injury Risk – Hep. B (30%) > C (3%) > HIV (0.3%)
- Hep. A & E - Naked viruses

Q206. Yellow discoloration of skin, sclera and oral mucosa (jaundice) is due to:

A. Bilirubin
B. Hemosiderin
C. Silver
D. Lead

Ans. A

Q207. Patient had bruise on elbow, which changed colour from yellow to brown. Pigment?

A. Lipofuscin
B. Hemosidrin

Ans. B

Remember:

Red Oxyhemoglobin 0-2 days
Blue Deoxyhemoglobin 2-5 days
Green Biliverdin 5-7 days
Yellow Bilirubin 7-10 days
Brown Hemosiderin 10-14 days

Q208. 40yrs old male with jaundice liver function tests shows direct bilirubin 10, AlP 1000, ALT 75, GGT 227 what is the most likely diagnosis?

A- Intrahepatic cholestasis
B- Hepatic cholestasis
C- Bile duct obstruction
D- Drug induced jaundice
E- Extra hepatic cholestasis

Ans: E

Q209. Pregnant woman whose U/S showed neural tube defects in baby, which marker would be used:

Ans. AFP

Remember:

- ✓ AFP raised in – Anencephaly
- ✓ AFP Decreased in – Down syndrome
- ✓ Specific For NTD – Acetyl cholinesterase
- ✓ Senstive For NTD – AFP

Q210. Infectious agent in cholangiocarcinoma:

A. Schistosoma mansoni
B. Schistosoma japonicum.
C. Chlonorchis

Ans. C

Q211. Athracotic pigment in lung is:

Ans. Carbon

Q212. Woman with corneal arcus and soft nodules on extensor tendons. Investigation:

A. Lipid profile
B. Glycosylated Hb
C. Lipid profile and HbA1C

Ans. A (Lipid profile only)

Q213. Male patient with h/o recent MI family history positive serum cholesterol 400. Which test to do?

A. Apolipoprotein B
B. Apolipoprotein C
C. LDL

Ans. A

Remember:

Best predictor of future MI or ACS in decreasing order

HsCRP (Highly sensitive CRP) > TC/HDL ratio > Apo-B/Apo-A ratio > LDL > Non-HDL (TC – HDL) > HDL

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Pathology – 2020

Q1. Primitive streak appears in which week?

A. 1st week
B. 2nd week
C. 3rd week
D. 4th week

Ans. C

Remember:

1st week: HCG secretions begin around the time of implantation of blastocyst.

2nd week: (2 layer): bilaminar disc (epiblast and hypoblast)

3rd week: (3 layers):

Epiblast invaginate → Primitive Streak → ectoderm, endoderm, mesoderm

Overlying ectoderm→ Neural plate

Mesoderm→ Not chord

Heart tube formed

4th week (4 Limbs, 4 chambers): upper and lower limb form and heart begins to beat

5th week gut rotation starts.

6th week: fetal cardiac activity visible by transvaginal U/S

8th week: fetal movements start

10th week: Genitalia have male/female characteristics

Weeks 3rd-8th: embryonic period, susceptible to teratogens, organogenesis occurs.

Difference between typical and atypical pneumonia

Features	Typical pneumonia	Atypical pneumonia
Onset	Sudden (< 2 days)	Gradual (> 3 days)
Age	Any	Generally> 5 yr
Fever	High grade	Low grade
Cough	Productive	Dry
X-ray changes	Localized	Diffuse
Organism	Pneumococcus (Strep pneumonia)	Mycoplasma
Treatment	Ceftriaxone or any broad spectrum antibiotic	Macrolides/tetracycline

Q2. 78 years old lady purple patches over body but all labs were normal, only bleeding time was increased > 7 minutes. Which of the following could be the cause?

A. Senile purpura.
B. Scurvy
C. Hemophilia
D. Vwb

Ans. A

Q3. Least likely factor affecting the healing of wound is:
A. DM
B. Persistent infection
C. Protein Def
D. Metabolic Disorder
Ans. D

Q4. Most significant findings in pyloric stenosis:
A. Hypokalemia
B. Hyperchlorhydia
C. Hyponatremia
D. Hypocalcemia
Ans. A

Explanation:
Hypokalemic hypochloremic metabolic alkalosis along with paradoxical aciduria

Q5. Which of the following organisms causes hypersensitivity reaction?
A. Herpes
B. TB
C. Leprosy
Ans. B (type IV)

Q6. What is the mechanism of apoptosis in autoimmune disease?
A. Molecular mimicry
B. Cross infection with virus
C. Gain of self-tolerance
D. Atopy
Ans. A

Q7. How to diagnose atypical pneumonia?
A. Blood culture
B. Sputum culture
C. Both A & B
D. Cold agglutinin
Ans. D

Note: Sometimes the diagnosis of atypical pneumonia is not given, rather case presentation is given, so please clarify your concepts regarding signs and symptoms of atypical pneumonia so you can easily identify it.

Remember:
a. Commonest community acquired streptococcus pneumonia
b. Hospital acquired staph aureus
c. Ventilator associated pseudomonas
d. Pneumonia after viral infection staph aureus
e. Pneumonia in diabetic and alcoholics klebsiella
f. Pneumonia with rusty sputum strep pneumonia
g. Pneumonia with currant jelly sputum klebsiella
h. Pneumonia in aids patient pcp
i. Pneumonia in copd patient h-influenza and moraxella
j. Pneumonia in cystic fibrosis pseudomonas
k. Atypical pneumonia mycoplasma
l. Walking pneumonia mycoplasma
m. Air condition related pneumonia legionella
n. Pneumonia with hyponatremia legionella
o. Purulent sputum staph aureus
p. Pneumonia plus neurologic symptoms legionella

Q8. Regarding esophagus histology:
A. Covered by squamous epithelium
B. Has stratified squamous epithelium in upper 1/3
C. Has stratified squamous in lower 1/3
D. Has 3 layers of muscles
E. Esophageal opening acting as anatomical sphincter
Ans. B

Remember:
Upper 1/3rd Stratified squamous non-keratinized
Middle 1/3rd Stratified squamous non-keratinized
Lower 1/3rd Simple columnar epithelium

Q9. 70 years old with recurrent UTI most likely due to:
A- Outflow obstruction
B- Carcinoma
C- Pyelonephritis
D- Renal Failure
E- Cystitis
Ans: A

Q10. Investigation to confirm diagnosis of Cushing syndrome:
A. 24 hours urinary free cortisol level
B. 48 hours low dose dexamethasone suppression test
C. Plasma ACTH level
D. Plasma cortisol level
E. Corticotrophin releasing hormone
Ans. B

Also remember the following recurring MCQs regarding Cushing's disease:

Q. Following occurs in cushing syndrome:

A. Lymphocytosis
B. Neutropenia
C. Eosinopenia
D. Leukocytosis

Ans. C

Remember:

Addison's disease: Eosinophilia
Cushing's syndrome: Lymphopenia, neutrophilia and eosinopenia

Q. A person with skin pigmentation and central obesity came in for evaluation. He has ACTH level report that shows declining pattern after dexamethasone test, which of the following is the cause:

A. Cushing syndrome
B. Cushing disease
C. Exogenous steroid use
D. Ectopic steroid production

Ans. B

Q11. Multiple myeloma diagnosis is made via which lab test?

A. Bence Jones protein
B. ESR
C. A.G ratio
D. Protein electrophoresis

Ans. D (don't confuse with A, as the method of diagnosis is being asked in the question)

Don't confuse with this MCQ:

Q. The diagnosis of amyloidosis is best confirmed by:

A) Bence jones proteinuria
B) Bone marrow
C) Clinical obs
D) Congo red test
E) Rectal biopsy

Ans. E

Q12. Sarcomere is seen on H zone, what will be seen on relaxed muscle?

A- Thin filaments
B- Thick filaments
C- Thin filaments arranged on array
D- Thick filaments arranged in array
E- Thin filaments surrounded by thick filaments

Ans: A

Remember mnemonic "SIDAU HD"

Sarcomere & **I** band **d**ecrease
A band remains **u**nchanged
H band **d**isappears

Q13. Philadelphia chromosome translocation 9:22 is present in which of the following?

A- CML
B- ALL
C- AML
D- CLL

Ans: A

Overview Of Common Chromosomal Translocations

Translocation	Gene product	Associated conditions
t(9;22)	» BCR-ABL hybrid	» CML, ALL (less common)
t(8;14)	» C-myc activation	» Burkitt lymphoma
t(14:18)	» BCL-2 activation	» Follicular lymphoma
t(11;14)	» Cyclin D1 activation	» Mantle cell lymphoma
t(11;18)	» BIRC3	» Marginal zone B-cell lymphomas
t(15;17)	» Promyelocytic leukemia protein	» Acute promyelocytic leukemia (M3-AML)
t(12;21)	» TEL	» B-cell acute lymphoblastic leukemia (B-cell ALL)
t(11;22)	» Fusion protein EWS-FLI1	» Ewing sarcoma

Q14. Turner syndrome has which karyotype?

A- 46 XX
B- 47 XXY
C- 45 XO
D- 47 XYY
E- 46 XY

Ans: C

Q15. Multiple washing technique is employed in which of the following?
A. Latex agglutination
B. Hemagglutination
C. Immunofluorescence
D. ELISA
Ans. C

Q16. Which of the following is the most commonly used anticoagulant used in stored blood?
A. CDTA/Citrate
B. Heparin
C. Streptokinase
D. Alteplase
Ans. A (Heparin is natural antithrombotic in blood)

Q17. How are cystoscopes and endoscopes sterilized?
A. Isopropyl alcohol
B. Autoclaving
C. Tyndilization
D. Chlorhexidine
Ans. C

Q18. Which of the following best describes autoclaving?
A. Moist heat at 121C for 15 minutes and 15 psi presssure
B. Moist heat at 131C for 15 minutes and 15 psi pressure
C. Dry heat at 121C for 15 minutes and 15 psi pressure
D. Dry heat at 131C for 15 minutes and 15 psi pressure
Ans. A

Q19. Which of the following was a reservoir for plague?
A. Rodents
B. Birds
C. Goats
D. Cats
Ans. A

Note:
The following bacteria is transmitted by rat urine: Leptospira interregna's (Weil's disease)

Q20. Splenic infarction is associated with which of the following:
A. ITP
B. CML
C. CLL
D. ALL
Ans. B

Q21. How is CML differentiated from leukemoid reaction?
A. Sudan B stain
B. PAS stain
C. Leukocyte alkaline phosphatase
D. Eosin stain
Ans. C

Note: ALP will be decreased in CML compared to Leukemoid reaction

Q22. Endogenous pigmentation causes:
A. Hemochromatosis
B. Hemosiderosis
C. Melatonin
Ans. B

Q23. Yellow brown granules were found in the hepatocytes of a man who was diagnosed with hereditary hemochromatosis, these granules became blue after staining with Prussian blue. These are:
A. Transferrin
B. Hemosiderin
C. Bilirubin
D. Biliverdin
Ans. B

Also know this MCQ:

Q. Iron storage in the parenchyma of organ in the form of:
A. Hemosedrin
B. Ferritin
C. Transferrin
Ans. B

Note:
"Hemochromatosis"
Initial investigation: Transferrin saturation
Definitive: Liver biopsy
Screening of family members: HFE gene mutation.

Q24. Which of the following is the most comm on cause of hospital-acquired pneumonia?
A. Staph Aureus
B. Pseudomonas
C. Strep pneumoniae
D. Mycoplasma
Ans. A

Q25. 29 yo went to remote area and developed mild watery diarrhea for over 1 week with no occult blood.

Diarrhea resolved after 2 weeks. Which of the following could be the cause?

A. Amoeba
B. Shigella
C. Vibrio
D. Rota

Ans. A

Q26. Lipofuscin is found in which of the following?

A. Brain
B. Skin and nails
C. Heart, liver, kidney
D. Thyroid and parathyroid

Ans. C

Also know the following related MCQs.

Q. 90 year old female, lipofuscin pigment present in histology report of cardiac muscle it indicates:

A. Cellular oxidation
B. Coagulation necrosis
C. Autophagy
D. Apoptosis
E. Atrophy

Ans. C

Q. Female died of IHD lipofuscin in cardiac fibers on histology heart is normal in size likely causes:

A. Apoptosis
B. Coagulation necrosis
C. Amyloidosis
D. Hypertrophy.

Ans. A

Q27. 13 year old girl presented with fatigue. Her father had recurrent anemia. On examination she is pale, jaundiced and tip of spleen is palpable. On lab testing osmotic fragility test is positive. Which type of cells will be seen on smear?

A. Spherocytes
B. Sickle shaped cells
C. Basophilic stippling
D. Eosinophilia

Ans. A

<u>According to recalls a scenario on G6PD deficiency was given. Here are some important recurring MCQs related to it:</u>

Q. Heinz bodies seen in:

A- Splenectomy
B- Sickle cell
C- Spherocytosis
D- G6PD

Ans: D

<u>Explanation:</u>

Heinz Body and Bite cells in – G6PD
Howel jowel bodies – Sickle cell and Splenectomy

Q. Decrease haptoglobin occurs in:

A- G6PD
B- Spherocytosis
C- Sickle cell disease
D- Cirhosis
E- Sideroblastic anemia

Ans: A

Q. What is the characteristic feature of disease G6PD deficiency?

A- Chronic hemolysis
B- Self-limiting hemolysis
C- Low haptoglobulin
D- Hemosiderinuria
E- Unconjugated bilirubin

Ans: B

Q28. Dapsone is given to a lady for erythema nodosum by dermatologist, she has Hb 6, MCV 110 diagnosis:

A) G6PD
B) Megaloblastic anemia

Ans. B

Dapsone given to a lady for erythema nodosum by dermatologist.Now she has dec Hb, Peripheral smear shows abnormal, small, irregular cells.

a) G6PD deficiency
b) Megaloblastic Anaemia

Ans. A

Q29. Which of the following is the most common site of metastasis of prostatic carcinoma?

A. Vertebrae
B. Brain
C. Liver
D. Lungs

Ans. A

Q30. 45yrs old female present with biliary colic, rash and cholelithiasis. Enzyme most likely raised will be:

A. ALT
B. AST
C. ALP
D. Glutamate Dehydrogenase

Ans. C

Q31. Which is produced by carcinoid tumor?

A- Serotonin

B- Histamine
C- Dopamine
D- Epinephrine
Ans: A

Q32. RBCs are protected from oxidative stress due to:
A. Anerobic metabolism
B. HMP shunt
C. Ankyrin
D. Spectrin
Ans. B

Q33. A patient with severe headache vomiting and neck stiffness raised ICP on Lumber puncture there was blood stained CSF diagnose is:
A- Subdural hemorrhage
B- Cerebral hemorrhage
C- Extradural Hematoma
D- Subarachnoid hemorrhage
E- Intraparenchynal hemorrhage
Ans: D

Q34. Stone in parotid gland duct will cause:
A. Atrophy
B. Necrosis
C. Apoptosis
Ans. C

Q35. Right shift of oxygen dissociation curve is caused by:
A- Increase PH
B- Acidosis
C- Decrease PCO_2
D- Decrease H^+ ions
Ans: B

Explanation:
Right Shift:
Right shift mean decrease affinity for O_2 and increase delivery to tissue (Bohar effect) thus increase P50.
Causes:
Increase CO_2
Decrease PH (Acidosis)
Increase Temperature
Increase 2, 3 DPG
Left Shift:
Left shift mean Increase affinity for O2 and decrease delivery to tissue (Haldane effect) thus decrease P50
Causes:
Decrease CO_2
Increase PH (Alkalosis)
Decrease Temperature
Decrease 2, 3 DPG
HbF
CO Poisoning

Q36. Tumor with nerve sheet involvement:
A) Carcinoma ex-pleomorphic adenoma
B) Hemangiopericytoma
C) Mucoepidermoid tumor
Ans: ?
Note: But adenoid cystic ca > pleomorphic adenoma.

Q37. Few days after infection with typhoid the organism resides in:
A- Gallbladder
B- Lung
C- Payer's patches
D- Liver
E- Colon
Ans: C

Explanation:
Typhoid reside in payer patches 1-4 weeks
Gall bladder - >4 weeks

Q38. A pregnant lady of 3rd trimester having unchanged:
A- LH
B- Cortisol
C- PTH
D- Estrogen
E- Growth hormone
Ans: E

Q39. ECG of patient showed absent p wave normal QRS complex and T wave, where should be the pacemaker?
A- SA node
B- AV node
C- Purkinji fibers
D- Ventricular muscle
Ans: B

Q40. Control of respiration rate and rhythm:
A. Apneustic
B. Pneumotaxic
C. Cerebellum
D. Dorsal
E. Ventral
Ans. B

Explanation:
i. Damage To Pneumotaxic Center=Deep Breathing (normally prevent excessive deep breathing)

ii. Damage to Apneustic Center=Shallow Irregular Breathing (Normally promotes deep Breathing)
iii. Transection above the level of pons=No effect on respiration
iv. Transection at Mid-Pontine Level (pneumotaxic)With Vagi Cut=Apneusis
v. Transection at Ponto-Medullary Junction= Irregular Breathin
vi. Transection Below Medulla=Stoppage Of Respiration.
vii. Increase Respiratory rate #Pneumotaxic
viii. #Duration of inspiratory Ramp signals are controlled by pneumotaxic center which inhibit inspiratory signals From Apneustic center
ix. Lung stretch receptors are activated By Over distention of lung which decrease respiratory rate by Hering breur reflex

Q41. A 40-year-old man goes on a camping vacation with his family. One day after swimming in a freshwater lake near the camp site, he develops nausea and vomiting and starts to behave irrationally. His family takes him to the emergency department, where blood samples are taken and a spinal tap is performed. He is diagnosed with a rapidly progressing meningoencephalitis and dies shortly thereafter. Which of the following protozoa was most likely the cause of the man's illness?

(A) Cryptosporidium species
(B) Entamoeba histolytica
(C) Leishmania donovani
(D) Naegleria fowleri
(E) Plasmodium falciparum

Ans: D

Q42. Regarding carcinoid tumour following are true except:

A. Are diagnosed by urine HIAA
B. Are found in lungs
C. Are most commonly found in terminal illeum
D. Are made up of kulchitsky cells which take up silver stain
E. Produce carcinoid syndrome only when metastasize to liver occur

Ans. C (as it's most common in tip of appendix)

Q43. Tunica media most fibres/thickest in:

A. Aorta
B. Great saphenous vein
C. Renal artery

Ans. A

Note: The tunica media, or middle coat, is thicker in arteries, particularly in the large arteries, and consists of smooth muscle cells intermingled with elastic fibres.

Q44. A 50-year-old homeless man was brought to the emergency room in a stuporous state. Blood pressure is 100/50 mmHg, heart rate 120 beats/min, respiratory rate 35/min, and his temperature is 104F (40C). He was found to have cellulitis of his left foot. Below are his lab results: Sodium 150mEq/L (135-145), Potassium 2.5mEq/L (3.5-5.0), Chloride 107mEq/L (95-105),Bicarbonate 10mEq/L (24-26), pH 7.2 (7.35-7.45), PCO2 25mmHg (35-45), Alcohol 40mmol/L (0), Osmolality 370mOsm/L (280-295), Glucose 50mg/dl (60- 110) BUN 40mg/dl (5-22). What is the acid-base status?

A. Metabolic acidosis and metabolic alkalosis
B. Metabolic acidosis with partial respiratory compensation
C. Respiratory acidosis and partial metabolic compensation
D. Respiratory acidosis

Ans. B

Q45. The medical student next to you, realizing that there is an examination question on acid base balance begins nervously hyperventilating and then faints. You make him breathe into a paper bag and he recovers. If you had drawn and analysed his blood when he fainted you would have expected to see:

a. Decreased pH, decreased pCO2
b. Decreased pH, decreased pCO2
c. Elevated pH, decreased pCO2
d. Elevated pH, elevated pCO2

Ans. C

Q46. A hospital patient with AIDS has large amount of diarrhea over the past 4 hours. He becomes hypovolemic over a

short period of time. Which of the following lab results would best fit this clinical history?

a. pH: 7.15, pCO2: 55 mmHg, HCO3: 40 mEq/L
b. pH: 7.25, pCO2: 36 mmHg, HCO3: 15 mEq/L
c. pH: 7.40, pCO2: 40 mmHg, HCO3: 24 mEq/L
d. pH: 7.50, pCO2: 28 mmHg, HCO3: 24 mEq/L

Ans. B

Q47. A 28-year-old man with bronchiectasis presents to the hospital emergency room with 3 days of increasing cough, sputum, and dyspnea despite maximizing his bronchodilators. About 1 month ago, an outpatient stable room arterial blood gas showed pH 7.38, PaO2 55 mmHg, PaCO2 65 mmHg, and HCO3- 32 mEq/L. His current vital signs are BP 117/65 mmHg, P 123/min, T 100°F. His room air ABG in the ER is pH 7.28, PaCO2 70 mmHg, PaO2 50 mmHg, and HCO3- 23 mEq/L. Which of the following best characterizes the current acid-base status?

A. Compensated metabolic acidosis
B. Compensated metabolic alkalosis
C. Uncompensated metabolic acidosis
D. Uncompensated respiratory acidosis

Ans. D

Q48. True about Turner's syndrome:

A. Brachycephalic and mental retardation.
B. Gonadal dysgenesis and hypoplasia of germinal epithelium.
C. Short stature and single palmer crease.
D. Widely spaced nipples and depressed nasal bridge.

Ans: B

Q49. Which is best option in identifying turner's syndrome:

A. Barbody
B. Karyotyping

Ans. B

Q50. A married middle aged female gives history of repeated abortions for the past 5 years. The karyogram shows 45XO, this suggests:

A. Klinfelter's syndrome
B. Turner's syndrome
C. Down's syndrome
D. Patau's syndrome

Ans. C

Q51. A couple has their first child with down syndrome. Both are young and mother is found to have robertsonian translocation. What is the risk of down syndrome in next baby?

A. 33%
B. 66%
C. 1%
D. 5%

Ans. D

Q52. In down syndrome robertsonian translocation transmit in how much % to next generation:

A. 15%
B. 50%
C. 33%
D. 80%

Ans. C

Q53. Patient is presented with complain of gynecomastia. On gene study 2X and 1Y chromosomes were found diagnose is:

A- Klinefelter's syndrome
B- Down syndrome
C- Turner syndrome
D- Patau syndrome
E- Craniopharyngioma

Ans: A

Q54. The epiblast and hypoblast meet at caudal ends at:

A- Cloacal membrane
B- Vitelline duct
C- Yolk sac
D- Extraepiploic membrane

Ans: A

Q55. A 50-year-old female presents with hypertension and increasing weight. Which of the following features would be most suggestive of Cushing's syndrome rather than simple obesity?

A- Abdominal striae
B- Acanthosis nigricans
C- Buffalo hump (interscapular fat pad)
D- Pot belly
E- Amenorrhea

Ans: A (Prefer Proximal myopathy

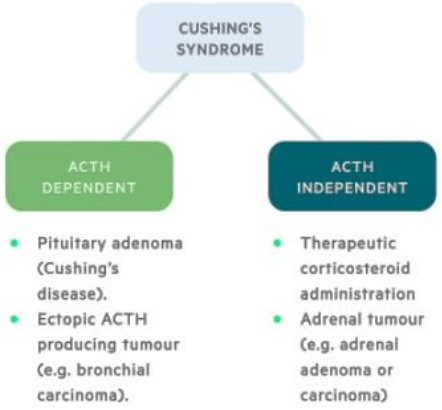
Q56. In Cushing syndrome:

A. ACTH raised Cortisol raised.

B. Cortisol raised, ACTH decreased

Ans. B

You should know the difference between Cushing's syndrome and Cushing's disease.



Also know:

Reviewing 34yr pt with amenorrhoea in clinic,telling u she gained 10kg weight in past 6week,and noticed worsening acne.routine blood test show RBS 11mmol/l,thyroid func normal,and pg test negative. BP-170/90. You suspect cushing's. What will be the most appropriate inv to confirm dx?

A. 9am cortisol level
B. Morning urinary cortisol
C. 24hr urinary free cortisol
D. Dexamethasone suppression test
E. Random serum ACTH
F. Late night salivary cortisol

Ans. C

Q57. Marathon runner after race will be having:

A- Increase insulin, decrease glucagon

B- Increase glucagon, decrease insulin

C- Decrease insulin and glucagon

D- Increase insulin and glucagon

Ans: B

Q58. Component of earth crust cases pulmonary fibrosis?

A. Coal
B. Silica

Ans. B

Q59. About pandemic:

A. Antigenic shift
B. Antigenic drift

Ans. A

Remember:

Antigenic shift = pandemics
antigenic drift = Epidemics

Q60. For assessing the risk of smoking for heart disease, 500 CHD pts were asked if they smoke or not, the 500 healthy friends with similar age sex and socioeconomic background were also asked about their smoking habits, the result revealed smoking is a risk factor for CHD, this is an example off:

A) Case control study

B) Cohort study

Ans. B

Learn to differentiate the above MCQ from this:

Q. A study was done to determine the importance of smoking as a risk factor for developing lung cancer 500 smokers with the disease and 500 healthy matched non smokers were evaluated. The type of study is?

A: Case control

B: Cohort

C: Correlation

D: Cross sectional

Ans. D

Explanation:

Case control study:

Disease vs Non disease
Related to ODD Ratio

Cohort study:

Group with risk factors and group without risk factors
Related to relative risk
Cause to effect
Forward study

Cross sectional study:

Disease and risk factors

Q61. Columnar epithelium with indistinct smooth muscle and crypts:

A. Uterine cervix
B. Fallopian tube
C. Uterus

Ans. C

Remember:

- ✓ Columnar epithelium with Crypts - Uterus(Uterus also has middle layer of indistinct smooth muscle)
- ✓ Columnar epithelium with Crypts - Endo cervix
- ✓ Columnar epithelium with Clefts- Fallopian tube

Q62. Serous acini with stratified epithelium?

A. Parotid gland
B. Lacrimal gland

Ans. B

Remember:

Serous + Cuboidal epithelium - Parotid
Serous + Stratified epithelium – Lacrimal

Q63. Cells of simple columnar epithelium are connected by:

A. Tight junctions,Adhering junctions, gap junctions
B. Tight, gap junctions, desmosomes
C. Tight junctions only
D. Desomosomes only

Ans. C

Also know:

Q. Two cells of simple columnar epithelium connected to each other by

A. Tight and gap junctions
B. Adherens and tight junctions
C. Tight junction gap junction and desmosome
D. Tight junction adherent junction and desmosome

Ans. D

Q64. A young male patient presented with pale skin, pale icteric conjunctiva. Labs show increase reticulocytosis and increased ALP:

A. Hemolytic anemia
B. Pigment stone
C. CBD obstruction
D. Hepatic cholestasis

Ans. B

Q65. Germinal centers are located in:

A) Cortex of lymph node
B) Medulla of lymph node
C) Thymus
D) Spleen

Ans. A

Q66. Characteristic/common feature of sarcoidosis?

A. Hypercalcemia
B. Erythema nodosum

Ans. B>A

Q67. Patient presented with right sided weakness for 2 days with diplopia while looking towards left. Where is the lesion?

A. Left internal capsule
B. Right internal capsule
C. Cerebral cortex
D. Midbrain

Ans. D (Weber syndrome)

Q68. Patient having right sided weakness and loss of vibration sense and tongue deviated to left lesion was?

A. Middle of medulla
B. Lateral of medulla
C. Superior to medulla
D. Middle of midbrain

Ans. A (middle medullary syndrome)

Remember:

Same side of body + face involved = uncrossed hemiplegia > site of lesion → *internal* *capsule*
Opposite face and body = Crossed hemiplegia > site of lesion → *Pons*

Q69. Right sided hemiplegia with left side facial weakness. The lesion is in:

A. Right internal capsule
B. Left internal capsule
C. Pons

Ans. C

Q70. Which of the following is raised in MI in first hour?

A) CK-MB
B) Myoglobin

Ans. B

Q71. AST will be raised in:

A. MI
B. Pericarditis
C. Pancreatitis
D. Muscular dystrophy

Ans. A (It is raised in all 4, but for for A)

Q73. In acromegaly growth hormone is in excess, which of the following is also increased in acromegaly?

A. ACTH
B. TSH
C. Somatomedian C

Ans. C

Q74. Best initial test for acromegaly:

A. Insulin like growth factor

B. Glucose suppression test
C. MRI

Ans. A

Q75. Acromegaly is caused by damage to which cells of pituitary?
A. Chromophobes
B. Acidophills

Ans. B

Q76. Excess growth hormone after epiphyseal closure causes:
A. Acromegaly
B. Giagantism

Ans. A

Q77. Muscle sensation carried by:
A. Muscle spindle
B. Motor end plate
C. Krause end bulb

Ans. A

Q78. Axons of alpha motor neuron:
A. Myelinated
B. Nonmyelinated
C. Pass thru post root
D. Terminate in intrafusal fibers
E. Terminate on motor end plate

Ans. A

Q79. What happens at nerve terminal during action potential?
A. Ca efflux
B. Ca influx

Ans. B

Q80. Difference between cardiac and skeletal muscle?
A- Transverse striations
B- Cardiac muscle has low T Tubules
C- Cardiac muscle doesn't get tetanized
D- Calmodulin

Ans: C

Q81. Sarcomere is seen on H zone, what will be seen on relaxed muscle?
A- Thin filaments
B- Thick filaments
C- Thin filaments arranged on array
D- Thick filaments arranged in array
E- Thin filaments surrounded by thick filaments

Ans: A

Q82. A female having low calcium height PTH and parathyroid hyperplasia due to:
A- Primary Hypoparathyroidism
B- CRF
C- Parathyroid adenoma
D- Ectopic parathyroid

Ans: B

Q83. Heat loss from body depends on:
A- Enivronmental temp
C- Evaporation
D- Diffusion

Ans: A

(According to students the option of "core body temperature" was not there, so A is the best option here, but otherwise choose core body temp)

Also know:

Q. Regarding body temperature regulation, heat conservation by:
A. Peripheral cutaneous vasodilation
B. Cutaneous vasoconstriction
C. Shivering

Ans: A

Q84. In multiple myeloma what is increased?
A- Plasma cells.
B- M proteins
C- Phosphate
D- Sodium
E- B cells

Ans: B

Q85. What is the reason M band is formed on electrophoresis in multiple myeloma?
A- IgA
B- IgG
C- IgM
D- IgE

Ans: B

Q86. 52 years man with lytic lesions in bone, back pain and weakness. Apple green birefringence & congo stain positive. Which is most suitable investigation to reach diagnose is:
A- Immunoelectrophoresis
B- Protein electrophoresis
C- Hb electrophoresis
D- Benze Jones Proteins
E- ELISA

Ans: B

Explanation:

Multiple myeloma shows green birefringence when stained with congo red stain and diagnosed by Protein Electrophoresis.

Also know: Lambda chain in urine is seen in multiple myeloma

Q87. A patient is using corticosteroid for very long time, he is at risk of:
A- Hypoglycemia
B- Hypokalemia
C- Osteogenisis
D- Osteoprosis and fracture
Ans: D

Q88. Detached embolus from deep veins of leg will lodge in:
A- Inferior vena cava
B- Lung
C- Heart
D- Femoral veins
E- Superior vena cava
Ans: B

Explanation:
Emboli first go to – IVC >Right atrium
Emboli first lodged in – Pulmonary artery (lung).

Q89. Infectious mononucleosis involves cells which appear as Atypical cells are of what type of cells?
A- Activated B cells
B- Plasma cells
C- NK cells
D- Activated T cells
E- Macrophages
Ans: D

Explanation:
IM shows Atypical Lymphocytes which include Activated T cells but Infected Cells are B cell.

Q90. Regarding blood supply of supra renal gland, which is inappropriate:
A- Receives blood from 3 arteries
B- All 3 branches of abdominal aorta
C- Receives blood supply from inferior phrenic artery
D- Receives blood supply from renal artery
Ans. B

Also know:

Q. About suprarenal gland true is:
A- Left renal vein drain into Renal vein
B- Right suprarenal vein drain into Renal vein
C- Left suprarenal vein drain into IVC
D- Left suprarenal vein drains into Renal vein
Ans: D

Explanation:
Right renal, supra renal, Gonadal and left renal all drain into – IVC
Left Supra renal and Gonadal vein drain into – Left renal vein.

Q91. Supra renal gland nerve supply:
A. T5 – T9
B. T5 – T11
Ans. A (Greater splanchnic)

Q92. Virus causes cancer by undergoing alteration in:
A- Nuclear integration
B- Cell membrane proliferation
C- Proto oncogene
D- Radicals
E- RNA
Ans: C

Q93. Hypophyseal structure receiving signals from hypothalamus via hypophyseal portal system:
A. Neurohypophysis
B. Adenohypophysis
C. Pericytes
D. Infundibulum
Ans: B

Q94. Pituitary tumor invades which of following bone?
A- Frontal bone
B- Sphenoid
C- Cribriform
Ans. B

Q95. Muscles of back are supplied by:
A- Dorsal rami
B- Dorsal rami of Spinal nerve
C- Intercostal nerve
D- Long thoracic nerve
E- Accessory nerve
Ans: B

Q96. Type of change in metaplasia is:
A- Polarity change
B- Irreversible change
C- Necrotic change
D- Functional and morphological change
E- Apoptotic
Ans: D

Q97. Adult polycystic kidney disease is:
A. Autosomal dominant
B. Autosomal recessive
C. X linked recessive
D. X linked dominant
Ans: A

Q98. Unique property of cardiac muscles:
A. Not easily fatigued

B. Gap junctions
C. 80% O_2 consumption at rest
Ans. C
Also know this similar MCQ
Q. Smooth muscle feature:
A. Not easily fatigued
B. Capable of smooth and sustained contractions
Ans. B
Q99. Platelets main feature is:
A. Non nucleated
B. Cytoplasmic granules
C. Plug formation when joins collagen fibers
Ans. C
Q100. Concerning eosinophils:
A. They are 1-4% of total number
B. Contain red granules
C. Have bilobed nucleus
D. All
Ans. D
(According to some recalls only option A was given, but you should know all these important characters of eosinophils)
Q101. Pedal edema in CHF and HTN is due to:
A- Salt and water retention
B- Hypoalbuminemia
C- Increase hydrostatic pressure
D- Increase oncotic pressure
E- Portal HTN
Ans: C
Explanation:
- ✓ Peripheral edema in CLD due to – Loss of albumin (Low oncotic pressure)
- ✓ Ascities in CLD due to – Portal HTN
- ✓ Renal origin Edema due to – Loss of albumin (Low oncotic pressure) + Can be salt and water retention.
- ✓ Nephrotic syndrome edema due to – Hypoalbuminemia
- ✓ Nephritis Syndrome edema due to – Salt and water retension
- ✓ Pedal edema in CHF and HTN due to – Increase hydrostatic pressure
- ✓ In CHF edema woarsen by – Sodium and water retention

Q102. Which of the following tumours secrete ACTH?
A. Medullary CA of thyroid
B. Squamous cell CA of lung
C. Small cell CA of lung
D. Papillary CA of thyroid
Ans. C
Remember:
Small Cell CA associated with
1-ACTH (Cushing Syndrome)
2-SIADH
3-Lambert Eaton
4-Poor Prognosis
Squamous Cell CA Associated with
1-Smoking
2-Hypercalcemia (PTHrP)
3- Keratin Pearls and Intracellular Bridges
Q103. A section of caudal pons consists of horizontal fibers. Theses fibers most likely consist of:
A- Superior cerebellar peduncle
B- Middle cerebellar peduncle
C- Inferior cerebellar peduncle
D- Sub thalamus
E- Thalamus
Ans: B
Explanation:
- ✓ Cerebellum connected to mid brain – Superior cerebellar peduncle
- ✓ Cerebellum connected to medulla – Inferior cerebellar peduncle
- ✓ A section of horizontal fibers in caudal pons – Middle cerebellar peduncle

Q104. Foramen cecum contains which of the following?
A- Emissary veins
B- Optic nerve
C- Lacrimal nerve
D- Frontal nerve
E- Maxillary nerve
Ans: A
Q105. A Young girl with bilateral ovarian mass consist of hair and teeth with adult cells on histopath, this is most likely:
A- Lymphoma
B- Cystic hygroma
C- Choriocarcinoma
D- Brenner tumor
E- Teratoma
Ans: E
Q106. A female patient comes in your office wearing revealing clothes and starts

talking in a seductive way. What will you do?

A. Call nurse
B. Refer patient to other doctor
C. Start asking about her personal life
D. Refuse examining her

Ans. A

Q107. What fluid if given will increase ECF volume but decrease ICF volume resulting in overall increase volume after achieving osmotic equilibrium?

A. 3% NaCl
B. 5% Dextrose
C. 0.9 % NaCl

Ans. A

Q108. A diabetic patient with abdominal pain, severe vomiting and visible peristalsis and audible sound on examination, the condition is:

A- GERD
B- Achalasia
C- Crohn Disease
D- Pyloric stenosis
E- Gastritis

Ans: D

Remember: Hypokalemic hyopchloremic metabolic alkalosis with paradoxical aciduria

Q109. A male presented to OPD with 104 fevers for last 4 days and gives history of using Anti-malarial She has been passing cola color urine for the last 1 day with deranged LFTs and increased unconjugated bilirubin. What is the cause?

A- G6PD
B- Black Water fever
C- Drug induced jaundice
D- Paroxysmal nocturnal hemoghlobinuria
E- Hemaolytic yremic syndrome

Ans: A

Q110. GFR is increased by:

A. Increase in GFR pressure
B. Decrease in hydrostatic pressure
C. Decrease in oncotic pressure

Ans. A

Q111. Simple columnar epithelium with goblet cells and submucosal lymphoid tissue:

A. Ileum
B. Duodenum
C. Stomach
D. Colon

Ans. A

Also know:

Lymphoid organ with absorptive epithelium having submucosal folds = Appendix

Q112. Eosinophil increase in?

A. Fungal infection
B. Viral infection
C. Bacterial infection
D. Parasitic infection

Ans. D

Q113. Most lethal in pregnancy:

A. Fatty liver pregnancy
B. Acute viral hepatitis

Ans. B

Remember:

Orofecal route – Hep. A >Hep. E
Most lethal Hepatitis – Hep. D
Most common in pregnancy – Hep. A
Most lethal/Remote Area in pregnancy – Hep. E

Q114. Important for oxygen transport:

A. CO_2 level in RBC
B. Hb in blood

Ans. A

Q115. About bone what is true?

A- Osteoblasts in how ships lacunae
B- Appositional growth
C- Alakaline Phosphatase released by osteoclast
D- Intramembranous ossification by cartilage model
E- Osteocyte form bone

Ans: B

Q116. A 17 year old girl with primary amenorrhea and absent secondary sexual characteristics. What would the karyotype be?

A. 47 XXY
B. 46XO
C. 45XO

Ans. C

Q117. Hepatitis B spreads through:

A- Coughing
B- Sneezing
C- Sexual contact
D- Breast feeding
E- Orofecal

Ans: C

Remember:

- ✓ Orofecal Route – Hep. A >Hep. E
- ✓ Most lethal hepatitis – Hep. D
- ✓ Most common sexual spread – Hep. B
- ✓ HCC – Hep. B > Hep. C
- ✓ Cirhosis- Alcohol >Hep. C > Hep. B
- ✓ Needle stick injury risk – Hep. B (30%) > C (3%) > HIV (0.3%)
- ✓ Hep. A & E – Naked Viruses

Q118. Cabergoline is administered as a single dose for lactation inhibition after still birth. MOA is:

A- B1 agonist
B- B2 agonist
C- D1 agonist
D- D2 agonist

Ans: D (According to some recalls name of drug was not mentioned)

Q119. Bioavailability of a drug increases if it is:

A- Largely hydrophobic yet soluble in water
B- Lipophobic
C- Hydrophilic
D- Drug with first pass metavolism

Ans: A

Q120. Longest pro erythrocytic phase is of which of following?

A- P. falciparum
B- P. Malaria
C- P. Ovale
D- P. vivax

Ans: B

Explanation:

- ✓ Plasmodium malarie can lead to – Nephrotic syndrome (Membranous GN)
- ✓ Plasmodium Vivax and ovale has – Hypnozoite stage (means sleep)
- ✓ Primaquine is DOC to kill – Hypnozoites.
- ✓ Shortest pre-erythrocytic phase is seen in – Plasmodium Falciparum.
- ✓ Longest pre_erythrocytic phase is in – Plasmodium Malariae
- ✓ Species that cause relapse are – Vivax and ovale
- ✓ Most common non falciparum malaria is – Plasmodium Vivax.
- ✓ DOC for non-falciparum malaria is – Chloroquine.
- ✓ Malignant tertian malaria is caused by – Plasmodium falciparum
- ✓ Benign tertian malaria (48 hours) is caused by – Ovale/vivax
- ✓ Quartan malaria (72 hours) caused by – Plasmodium Malariae
- ✓ Quotidian malaria caused by – plasmodium Knowlesi > Falciparum
- ✓ Anemia in malaria is – Normocytic normochromic.
- ✓ Dormant phase of malaria – Hypnozoite
- ✓ Malaria enter into human body as –Sporozoite
- ✓ Sporozoite divide in liver as – Merozoite
- ✓ New species of malaria is – Knowlesi

Q121. Juvenile polyp also called:

A- Hemartomatous polyp
B- Rectal polyp
C- Internal hemorrhoid
D- Adenomatous polyp

Ans: A

Also know these recurring MCQs:

Q. A 50 year old patient came for routine checkup everything was normal except for occult blood in stool. On Colonoscopy polyp with a stalk covered with normal intestin epithelium

A. Peutz jagers polyp
B. Adenaomatous polyp
C. Hyperplastic polyp
D. Hamartomus polyp

Ans. C

Q. A 55 year male with past history of epigastric pain for which he was taking Antacids was diagnosed as gastric lymphoma. What is the most likely cause:

a- Drug induced gastritis
b- Ulcer
c- Intestinal metaplasia
d- Atropic gastritis
e- H.pylori

Ans: E

Q122. Disturbed carbohydrate metabolism can occur in deficiency of which of the following enzymes?

A- Enterokinase
B- Lactase
C- Trypsinogen
D- Trypsin
E- Chymotrypsin

Ans: B

Q123. A disease which is going to affect both male and female and has 50% chance to affect the offspring is:

A. X linked dominant
B. Autosomal recessive
C. Autosomal dominant

Ans. C

Q124. A patient has history of antacid use. On endoscopy it is seen that the surface cells in gastric antrum are destroyed. This can be best described as:

A. Achlasia
B. Ulcer
C. Nodule
D. Hernia

Ans. B

Q125. Common cause of death from hemochromatosis is:

A. Bronze diabetes
B. Dilated cardiomyopathy
C. Arthropathy
D. HCC

Ans. D (DCM is reversible in HCM)

Remember: Iron-caused damage to the pancreas leads to diabetes, called "bronze diabetes"

Q126. Diagnosis of sarcoidosis is made microscopically by:

A. Non caseating granuloma
B. Granuloma with asteroid

Ans. A

Q127. A patient presented to you with Achilles tendon xanthomas and was diagnosed with familial hypercholesterolemia where the defect lies in LDL receptor signaling. You know that statins increase LDL receptor signaling. Which type of hypercholesterolemia has defective LDL receptor:

A. Type 1
B. Type 2A
C. Type 2B
D. Type 3

Ans. B

Type	Lipoprotein fraction elevated	Cholesterol elevated	TAG level	Metabolic defect	Features
Type I (Familial LPL deficiency)	Chylomicrons	Normal	↑↑	Lipoprotein lipase deficiency	Eruptive xanthoma, Hepatomegaly, Pain abdomen
Type II A (Familial hyper cholesterolemia)	LDL	↑↑	Normal	LDL receptor defect, Apo B ↑	Atherosclerosis, CAD, Tuberous xanthoma
Type II B (Familial combined hyperlipidemia)	LDL, VLDL	↑↑	↑↑	Apo B ↑ Apo C – II	Corneal arcus
Type III (Familial dys- beta-lipoproteinemia)	Broad beta VLDL, Chylomicrons	↑↑	↑↑	Abnormal Apo E Apo C – II ↑	Palmar xanthoma, High incidence of vascular disease
Type IV (Familial hyper triglyceridemic)	VLDL	↑↑	↑↑	Over production of VLDL Apo C – II ↑	Associated with DM, Heart disease and Obesity
Type V (Endogenous hyper triglyceridemia)	VLDL, Chylomicrons	Normal	↑↑	Secondary to other causes	Chronic pancreatitis

Q128. 1st heart sound is due to:

A- Rapid ejection
B- Rapid filling
C- Isovolumetric relaxation
D- Isovolumetric contraction
E- Slow Ejection

Ans: D

Explanation:

- ✓ **First heart sound** – Isovolumetric contraction (Closure of mitral and tricuspid valve)
- ✓ **Second heart sound** – Isovolumetric relaxation (Closure of aortic and pulmonary valve)
- ✓ **Third heart sound** – Rapid ventricular filling (Normal in children pregnancy and athletes)

Q129. Thyroglobulin is produced from:

A- Chief cells
B- Follicular cells
C- Parafollicular cells

D- Isthmus
E- Tracheal ring
Ans: B (BRS)

Q130. Diabetic nephropathy investigation?
A. Serum albumin
B. Urinary sugar
C. Urine for Microalbuminuria
Ans. C

Q131. During exercise cardiac output is augmented by:
A. Vasoconstriction
B. Local metabolites
C. Sympathetic action on resistance vessels
Ans. C

Q132. Patient taking ATT for 2 months presented with raised ESR. The cause could be MDR TB?
A. Superimposed bacterial infection
B. Anemia
C. Cholestasis
D. Hepatitis
Ans. A

Q133. Peripheral neuropathy secondary to diabetes which layer is defective?
A. Epineurium
B. Perineurium
C. Endomeurium
D. Endothelial cells
Ans. D (Non enzymatic glycosylation of endothelial cells happens)

Q134. vWF disease scenario. BT and APTT are both deranged. Where is the main defect?
A. Platelet adhesion
B. Platelet aggregation
Ans. A (It is very easy to confuse between both options, memorize this well)

Also know
First step in thrombin formation = Endothelial injury
First step in thrombus formation = Deposition of platelet on endothelium
How vWF plays a role in hemostasis = By platelet adhesion to collagen

Q135. Vitamin needed for protein metabolism is:
A- Riboflavin
B- Thiamine
C- Biotin
D- Pantothenic acidacid
E- Vitamin E
Ans: A

Explanation:
- ✓ For carbohydrates – Thiamine
- ✓ For Proteins – Riboflavin
- ✓ For Lipids – Biotin

Q136. Why doesn't hyperaldosteronism cause edema?
Ans: Escape phenomenon

Explanation:
ANP causes down-regulation of epithelial sodium channels in collecting tubules (recall that aldosterone works by up-regulating epithelial sodium channels). So when there are less sodium channels in collecting tubules, less sodium will be reabsorbed and less fluid retains.. This is known as aldosterone escape

Also know:

Q. Aldosterone escape phenomenon is seen in:
A. Cushing disease
B. De Quervain thyroiditis
C. Hashimato thyroiditis
D. Conns syndrome
E. Adrenal insufficiency
Ans. D

Q137. Net reabsorption of sodium in kidney is maintained by:
A. ANP
B. Aldosterone
C. ANP plus aldosterone
D. Renin angiotensin system
Ans. C

Explanation:
- ✓ Sodium Absorption – **Aldosterone**
- ✓ Sodium excretion – **ANP**
- ✓ Net SODIUM Absorption – **Aldosterone & ANP**

Q138. Child presented with vomiting, poor feeding, urine like maple syrup burnt sugar. Which enzyme is deficient in liver? OR Maple syrup urine disease is caused by deficiency of:
A. Phenylalanine Hydroxylase
B. Alpha ketoacid dehydrogenase
C. Homogenetic acid synthetase
Ans: B

Remember:
- ✓ In MSUD defect is in metabolism of "BRANCHED CHAIN" amino acids

- ✓ MSUD = Smell of burnt urine
- ✓ Dark black urine = Alkaptonuria

Q139. Boy with palmar xanthomas and high cholesterol which type it is?

A- Hypercholestronemia 1
B- Hypercholesterolemia2 a
C- Hypercholesterolemia2b
D- Hype rcholesterolemia3

Ans: D (FA)

Explanation:

- ✓ Pruritic xanthomas – Type 1
- ✓ Achilles xanthomas – Type 2
- ✓ Palmar xanthomas – Type 3
- ✓ High TAG – Type 4
- ✓ Commonest type of hyperlipidemia – Type 2 (LDL receptor defect)

Q140. Muscle spindle acts through:

Both alpha and gamma motor discharge > gamma motor discharge

Remember:

Muscle Sensors:

1. Muscle Spindle:- Innervated by 1a and 2 fibers--> arrangement in parallel

->1a (nuclear bag) detects DYNAMIC change in muscle LENGTH.

-> 2 (nuclear chain) detects STATIC change in muscle LENGTH..

2. Golgi Tendon:- Innervated by 1b fibers → arrangement in series &detects Muscle tension.

Q141. A 65 year male develops right sided hemiplegia and slight deviation of angle of mouth to left while talking he is able to close his eyes on command what other finding can be present?

A- Lead pipe rigidity
B- Clasp knife Spasticity
C- Muscle fasciculation
D- Atrophy
E- Low Tone

Ans: B (UMN type lesion)

Also know:

Clasp knife rigidity is seen in lesions of – Corticospinal tract

Q142. Patient with lesion in brain, present with Resting tremor, stooped posture, shuffling gate and expressionless face, Lesion in which part of brain:

A- Cerebrum
B- Cerebellum
C- Substantia nigra
D- Pons
E- Medulla

Ans: C (Parkinsonism)

Q143. Patient has lost pain and temperature sense, where is the lesion?

A- DCML
B- Nucleus gracilis
C- Lateral spinothalamic tract
D- Anterior spinothalamic tract
E- Nucleus cuneatus

Ans: C (Kaplan + Neurosnell)

Explanation:

- ✓ Fine touch pressure vibration and proprioception carried by – Dorsal Column (Posterior white column).
- ✓ Gracilis – For lower limb
- ✓ Cuneatus – For upper limb
- ✓ Anterior spinothalmic – Crud touch and Pressure
- ✓ Lateral spinothalmic – Pain and Temperature.

Q144. Wheatstone bridge principle is used to measure?

A- Cardiac out put
B- Respiratory rate
C- Renal blood flow
D- Cerebral blood flow

Ans: A

Q145. Type of hypersensitivity in lupus nephritis?

A. Hypersensitivity type III
B. Hypersensitivity type IV
C. Hypersensitivity type II

Ans. A

Q146. A patient presented with sinking of heart and weakness his ECG show inverted T waves and prominent U waves due to:

A- Hyponatremia
B- Hypocalcemia
C- Hypokalemia
D- Hypocholerima
E- Hyperphosphatemia

Ans: C

Q147. A patient present with muscle weakness ptosis and x-ray shows enlarge structure in anterior mediastinum. Which of the following is the gold standard test for this disease?

A- EMG
B- MRI

C- USG
D- Anti Ach receptor antibody
E- ECG
Ans: A
Explanation:
- ✓ Myasthenia gravis – Antibodies' against postsynaptic voltage gated cannels cause damage to Acetylcholine receptor
- ✓ Diagnostic test – ACH receptor antibodies.
- ✓ Most accurate/confirmatory/gold standard – EMG
- ✓ Initial drug for Myasthenia gravis – Neostigmine
- ✓ DOC for maintained therapy – Pyridostigmine.
- ✓ Physostigmine – Crosses BBB immediately and increase acetylcholine.
- ✓ In lambert eaten syndrome – Antibodies are directed against calcium channels

Q148. Ischemia of SMA which part of colon is spared from damage?
A- Ascending colon
B- Descending colon
C- Transverse colon
D- Duodenum
Ans: B
Q149. Chorionic villus sampling done at which week?
A- 11 week
B- 15 week
C- 19 week
D- 20 week
Ans: A (Ten teacher)
Explanation:
- ✓ CVS at – 11 week and 2% risk of miscarriage.
- ✓ Amniocentesis at – 15 week and 1% risk of miscarriage.
- ✓ Cordocentesis at – 20 weeks and 2-5% risk of miscarriage.

Q150. Which of the following is the second abundant component of protoplasm of cells?
A. Carbohydrate
B. Lipids
C. Proteins
D. Electrolyes
Ans. C (After water)
Q151. Aorticorenal ganglion level?
A. T5 – T11
B. T9 – T11
Ans. B
Explanation:
- ✓ Aorticorenal ganglionis composed of the superior mesenteric, renal, and inferior mesenteric ganglia. (T10-T11)
- ✓ Celiac ganglion - T5 to T9

Q152. Lesion at right optic tract results in:
A- Blindness
B- Left homonymous hemianopia
C- Right homonymous hemianopia
D- Heteronymous hemianopia
Ans: B
Explanation:
- ✓ **Middle** optic chiasma Lesion – **Bitemporal** Heteronymous Hemianopia
- ✓ **Optic track** lesion – **Homonymous hemianopia**
- ✓ **Geniculocalcarine tract** Lesion – **Homonymous hemianopia with macular sparing**
- ✓ **Right** Optic Track Lesion -- **Left Homonymous Hemianopia**
- ✓ Pituitary Tumor with **Homonymous** hemianopia – **Optic Track lesion**
- ✓ Pituitary Tumor with **Heteronymous** hemianopia – **Optic Chiasma Lesion**
- ✓ Right Optic Track Lesion causes – Right Temporal and Left Nasal **Fibers loss**
- ✓ Right optic track lesion causes – Right Nasal and left temporal **vision loss**
- ✓ **Right optic track is made up of** – Right temporal fibers (which See Nasal Vision) and left nasal fibers (which see temporal vision) so fibers loss and vision loss are Separate things.
- ✓ Patient is blind on testing but has no insight of vision loss – **Cortical blindness.**
- ✓ Cortical blindness due to blockage in – **PCA**

Q153. Interstitial fluid contains:
A- 14L
B- 11.5L
C- 42L
D- 28L
Ans: B
Explanation:
- ✓ Total body fluid – 42L
- ✓ ICF – 28L
- ✓ ECF – 14L (Interstitial 11.5 L and Plasma 3.5L)

Q154. Chi square chart used for which of following?
A- Nominal Data
B- Categorical data

C- Ordinal data
D- Mean of two
Ans: B

Explanation:

- ✓ T Test – Mean of 2 groups
- ✓ Anova Test – Mean of 3 or more groups
- ✓ Chi Square – 2 by 2 Table and Categorical Data
- ✓ Pie Chart – Related to Percentages

Q155. Square root of variance = Standard deviation

Q156. Prostate mainly drain into the:
A- Internal illac and sacral lymph node
B- External and inguinal lymphnode
C- Paraortic lymph node
D- Superficial inguinal lymph node
Ans: A (BD)

Explanation:

Prostate drain into both internal and external iliac but mainly in internal iliac and sometimes to sacral nodes.

Q157. Diagnostic criteria for bronchial asthma:
A- FEV1 >65
B- FEV1/FVC<65%
C- FEV1 ZERO
D- FEV1/FVC normal
E- FVC normal
Ans: B

Q158. Stab wound on right side below and lateral to umbilicus will cause injury to:
A- Peritoneum
B- Hepatic vein
C- Hepatic artery
D- IVC
E- Renal artery
Ans: D

Remember:

- ✓ Stab wound just lateral to Xiphisternal joint on right side. Structure damaged is: IVC
- ✓ Stab wound occurs in 4th intercostal space near the lateral border of sternum, the 1st structure most likely damaged would be: internal intercostal membrane
- ✓ 4th ICS.... Intercostal membrane
- ✓ 5th ICS... Intercostal muscle
- ✓ 6th ICS... Right atrium
- ✓ Which of the following would be most likely to be damaged by a stab wound into the ischiorectal (ischioanal) fossa 2 cm lateral to the anal canal: Pudendal Nerve
- ✓ A young thin lordotic man is brought to the emergency, he has a stab wound measuring 3cm vertically, situated on the right lateral side of linea Alba, below the umbilicus, initially his B.P and pulse were normal but later he goes into hemorrhagic shock. Which vessel is most likely to have been nicked: IVC

Q159. Patient had mid diastolic murmur and left atria hypertrophy leading to Pulmonary hypertension. What other features he would have?
A. RVH
B. LVH
C. Decrease EDV
Ans. A

Q160. Absent Surfactant leads to which of the following:
A- Decrease oxygen tension
B- Increase compliance
C- Decrease compliance
D- Decrease elastic recoil
Ans: C

Explanation:

- ✓ Surfactant normally decreases surface tension and Increase lung compliance.
- ✓ Surfactant deficiency cause increase surface tension and decrease lung compliance.

Q161. In the aortic opening if diaphragm is constricted which of the following structure will be compressed along with aorta?
A- Azygous veins and both phrenic nerve
B- Thoracic duct and vagus nerve
C- Azygous vein and vagus nerve
D- Inferior vena cava
E- Thoracic duct and azygous vein
Ans: E (Snell +KLM)

Explanation:

Aortic opening (T12) – Aorta, thoracic duct and azygous vein.
Esophagous opening (T10) – Esophagous, Right and left vagus, lymphatics.
Caval opening (T8) – IVC and Right phrenic.

Q162. Sneeze reflex afferent via:
A- Vagus
B- Trigeminal
C- Abdudent
D- Accessory
Ans: B

Q163. Patient given Antibiotic clindamycin for 2 weeks now patient has fever and GIT symptoms like loose stool other examination finding is whitish membrane diagnose is?

A- Grey patch on Trachea
B- Pseudomembranous colitis
C- Membranous Heart
D- Atrophic tonsil

Ans: B

Q164. Anesthetic that causes bronchodilation is:

A- Pethidine
B- Ketamine
C- Propofol
D- Halothane

Ans: B

Remember the following points about ketamine

- ✓ Profound Analgesia
- ✓ Anasthetic in Asthma
- ✓ Cause Bronchodilation
- ✓ Raised ICP(Avoided in Head Injury)
- ✓ Used in Burn Patient and Haemodynamically Unstable
- ✓ Increase HR and BP (Sympathomimetic)

Q165. Late effect of insulin?

A. Protein transcription for lipogenic enzymes
B. Protein synthesis
C. Entry of sodium into cells
D. Entry of potassium into cells

Ans. A

Remember:

Immediate action of Insulin – **Entry of potassium into cells**
Intermediate Action of Insulin – **Protien Synthesis**
Late Action of Insulin – **Lipogenesis**

Q166. Patient came for cardiovascular checkup having heart rate 48 Stroke volumes 118 this is seen in:

A- Sympathomimetic drugs
B- Athlete
C- Para Sympathomimetic drugs
D- Rest

Ans: B

Q167. How is blood supply to non exercising muslces regulated during exercise?

A. Sympathetic cholinergic
B. Local metabolites
C. Lactic acid
D. Adenosine

Ans. A

Remember the following points regarding exercise

- ✓ During Exercise blood flow increased to -- **Exercising skeletal muscle**
- ✓ During Exercise decreased blood flow to -- **Kidneys > Splanchnic Vessels**
- ✓ During **Strenous Exercise** decreased blood flow to -- **Skin**
- ✓ During Exercise blood flow to **Exercising muscles** is maintained by -- **Local Metabolites**
- ✓ During Exercise blood flow to **Non-Exercising Muscle** is maintained by – **Sympathetic Cholinergic**
- ✓ During Exercise there is an increase in -- **Ventricular contractility**
- ✓ **During Exercise subjective** feelings of getting tired is due to – **Increased Heart rate**
- ✓ **After Exercise** feeling of getting tired is due to – **Increased Lactic acid**

Q168. Activation of which of the following occurs in lung?

A. Angiotensin 2
B. Angiotensin 1
C. Bradykinin
D. Serotonin

Ans. A

Remember:

- ✓ Activated in Lung – Angiotensin 2
- ✓ Inactivated in Lung – Bradykinin (By ACE) & Serotonin

Q169. A lady has anterograde amnesia/Short term memory loss occurs due to lesion of?

A- Hippocampus
B- Parahippocampal
C- Neocortex
D- Frontal lobe

Ans: A

Q170. Blood supply of thalamus is by:

A. Posterior cerebral artery
B. Posterior communicating artery
C. MCA

Ans. A

Q171. A laborer after exertion is brought to you in a semiconscious state with plasma Na +120. Most likely cause is:

A. Increased water intake
B. Increased sweating
C. Vomiting
D. ADH

Ans. A

Q172. Spironolactone causes:

A. Hyperkalemia
B. Hypokalemia
C. Hyponatremia
D. Hypernatremia

Ans. A

Note: Spironolactone also causes gynecomastia

Q173. After head injury biconvex shaped hemorrhage seen on CT scan, which vessel was likely damaged?

A. Subdural veins
B. Epidural veins
C. MMA

Ans. C

Extradural Hematoma	Subdural Hematoma
MMA involved	Bridging vein > Superior cerebral vein involved
Lucid interval	No Lucid interval
Biconvex	Crescent shaped
Not cross Suture lines	Cross Suture lines

Q174. Patient having right sided weakness and loss of vibration sense and tongue deviated to left lesion was?

A. Middle of medulla
B. Lateral of medulla
C. Superior to medulla
D. Middle of midbrain

Ans. A

Note: Inferior alternating hemiplegia also called "Medial Medullary Syndrome". CN12 nucleus is placed centrally in the middle of medulla. Caused by obstruction of anterior spinal artery.

Also know:

Q. Examination of a patient revealed that he had right sided paralysis of the tongue, left sided hemiparesis and left sided lemniscal sensory loss. Occlusion of which of the following artery result in the following manifestations?

A. Anterior inferior cerebellar artery
B. Middle cerebral artery
C. Penetrating branch of vertebral artery
D. Anterior cerebral artery

Ans. C

Q175. A 5 Years old male child brought by her mother to child OPD, failure to thrive, edematous feet, tender hepatomegaly and distended abdomen, weight 60%, the most likely diagnosis:

A- Marasmus
B- Post step glomerulonephritis
C- Kwashiorkor
D- Nutritional deficiency
E- Nephrotic Syndrome

Ans: C

Explanation:

Kwashiorkor	Marasmus
Deficient proteins	Deficient proteins and calories
Hair changes present	Hair changes not present
Fatty liver common	No fatty liver
Edema present	Edema not present
Subcutaneous fat present	Subcutaneous fat not present
Poor appetite	Good appetite
No muscle wasting	Severe muscle wasting

Don't confuse with this mcq:

Q. 11 month baby brought by mother with complains that the baby is semi unconscious and listless.O/E no response to vocal stimulation, weight 60% of age and a small purple contusion is found on his thigh. What is probable diagnosis?

A) Prematurity
B) Marasmus
C) Kwashiorkor
D) Calcium deficiency
E) Physical abuse

Ans. E

Q176. PG was advised to take splenic biopsy sample Surgeon advised him to be careful not to injure the costodiaphragmatic recess this potential space lies at which level?

A- 10th rib at midaxillary level
B- 11th rib at mid axillary level

C- 12th rib at midaxillary level
D- 11th rib at mid clavicular level
E- 10th rib at midclavicular level
Ans: A
Also know:
Q. Costodiaphragmatic recess lies b/w?
A) Costal margin nd parietel pleura
B) Costal margin nd visceral pleura
C) Visceral pleura and diaphragm
Ans. C
Q177. Vit. D levels are assessed by:
A. 25 OH cholecalciferol
B. 24 25 Vit D3
C. 24 25 cholecalciferol
Ans. A
Q178. Brain tumour seen with immunohistopathology showing GFAP + cells. This is malignancy of which cells?
A. Ependymal cells
B. Astrocytes
C. Glial cell
D. Schwann cells
Ans. B
Q179. A sample from a female patient shows tubular and ductal tissue, how will you proceed?
A. Cytology
B. Tumour markers
C. Cell smear
Ans. A
Q180. The tumour marker for HCC is:
A. GFAP
B. CA19-9
C. AFP
Ans. C
Q181. 30-week pregnant lady tell that she has consumed moderate amount of alcohol during 1st trimester what is risk to baby?
A- Microcephaly
B- Delayed birth
C- Edward Syndrome
D- Epicanthal fold
E- Short Nasal Bridge
Ans: A
Q182. Child with frontal and occipital bossing due to premature closure of which suture?
Note: This is scaphocephaly
A- Sagittal
B- Parietal
C- Coronal
D- Occipital
Ans: A
Q183. A female had aortic root dilation upto 4cm, ocuular examination showed lens dislocation. mitral valve leaflet defect with a systolic click defect in which of the following?
A- Acquired deficiency of fibrillin
B- Inherited deficiency of fibrillin
C- Inherited deficiency of laminin
D- Acquired deficiency of Spectrin
Ans: B
Q184. Suprarenal medulla supplied by:
A- Greater splanchnic
B- Lesser splanchnic
C- Least splanchnic
D- Intercostal
Ans: A
This MCQ has also been asked like this:
Nerve Supply of medulla of adrenal gland = Greater thoracic splanchnic.
Q185. Bradykinin released from lungs will act on which vessel?
A. External iliac vessel
B. Brachial artery
C. Femoral artery
D. Ductus arteriosus
Ans. D
Q186. A farmer with horn like lesion on forehead, what could it be?
A. Actinic keratosis
B. BCC
C. SCC
D. Melanoma
Ans. A (Sebaceous horn > Actinic keratosis)
Q187. A patient undergoing thyroidectomy the nerve likely to be injured in vicinity of inferior lobe of thyroid:
A- Recurrent laryngeal nerve
B- Internal laryngeal nerve
C- External laryngeal nerve
D- Vagus nerve main stem
E- Accessory nerve
Ans: A
Explanation:
✓ Upper Lobe – ELN
✓ Lower Lobe – RLN

- ✓ Superior thyroid artery related to – ELN
- ✓ Inferior thyroid artery related to – RLN
- ✓ Superior laryngeal artery related to –Internal laryngeal nerve
- ✓ Most common nerve injured during thyroidectomy – ELN
- ✓ Most common nerve injured during tracheostomy – RLN

Q188. Women with the history of trauma to head and neck region having lesion on tongue on protrusion of tongue deviated to the left side the nerve most likely involve is:

A- Left hypoglossal
B- Right hypoglossal
C- Glossopharyngeal nerve
D- Vagus nerve
E- PICA

Ans: A (FA)

Explanation:

- ✓ **CN V motor lesion** – Jaw deviates **toward** side of lesion
- ✓ **CN X lesion** – Uvula deviates **away** from side of lesion
- ✓ **CN XI lesion** – Weakness turning head to contralateral side of lesion (SCM) Shoulder droop on side of lesion (trapezius)
- ✓ **CN XII lesion** – LMN lesion. Tongue deviates t**oward** side of lesion

Q189. Herniation between C5 C6 nerves injured:

A- C5
B- C6
C- C8
D- C2

Ans: B

Q190. A construction worker came with dry cough and weight loss. CXR showed pleural plaques. Which lung lobes does asbestosis affect?

A. Upper lobes
B. Middle lobe
C. Lower lobes

Ans. C

Explanation:

Asbestosis

Affect Lower lobe
Associated with Shipbuilding, roofing, plumbing
Supradiaphragmatic and pleural plaques are pathognomonic of asbestosis.
Risk of bronchogenic carcinoma > risk of mesothelioma
Increase risk of caplan syndrome
Iron staining done for ferruginous (Asbestose) Bodies

Silicosis

Affects upper lobes
Associated with sandblasting, foundries, mines
Leads to TB
Increase Risk of cancer, cor pulmonale and Caplan syndrome
Eggshell calcification of hilar lymph nodes on CXR

Coal Worker pneumoconiosis

Affects upper lobe
Prolonged coal dust exposure macrophages laden with carbon lead to fibrosis
Also known as black lung disease increase risk of Caplan syndrome

Anthracosis - Asymptomatic milder type of pneumocobisosis condition found in many urban dwellers exposed to sooty air

Q191. A Young man working in factory for the last 5 years presented with painless hematuria and weight loss, on histopathology it was confirmed that the patient is suffering from urothelial carcinoma the most probable agent involve in the pathogenesis is:

A- Vinyl chloride
B- Benzidine dye
C- Anilline dye
D- Arsenic
E- Nitrosamine

Ans: C

Explanation:

- ✓ Plastic factory worker – Liver angiosarcoma
- ✓ Plastic factory worker + Smoking – lung CA > Angiosarcoma
- ✓ Hydrocarbon (Tyre factory) + aromatic amines – Bladder CA
- ✓ Smoking + hydrocarbon – Lung CA > bladder
- ✓ Liver CA – Acohol >Aflatoxin > Smoking
- ✓ Transitional bladder CA – Smoking >Amines > hydrocarbon
- ✓ Squamous Cell Bladder CA – Schistostoma >Stones > Indwelling
- ✓ Aromatic amines and azo dyes widely used in Aniline dye these include

✓ 2-Naphthylamine ,Benzidine and 2-Acetylaminofluorene so All aromatic amines used in Aniline dye so best ans is Aniline dye

Q192. A patient having rheumatic heart disease with associated mitral stenosis what prophylaxis before dental surgery should be given?

A- Azithromycin
B- Ampicillin
C- Ceftriaxone
D- Ciprofloxacin
E- Ofloxacin

Ans: B

Q193. Chemotherapy induced vomiting is treated by?

A- Ondansetrone
B- Metachlopromide
C- Omeprazole
D- Cimetidine
E- Fimotidine

Ans: A

Remember:

MOA of ondansetron = 5HT3 antagonist

Q194. Which of the following is a drug that increases gastric emptying and increase lower esophageal sphincter tone & thus used in diabetic gastroparesis?

A- Ondansetron
B- Metoclopramide
C- Omeprazole
D- Cimetidine
E- Famotidine

Ans: B

Q195. Portal of entry of meningococcal meningitis is via?

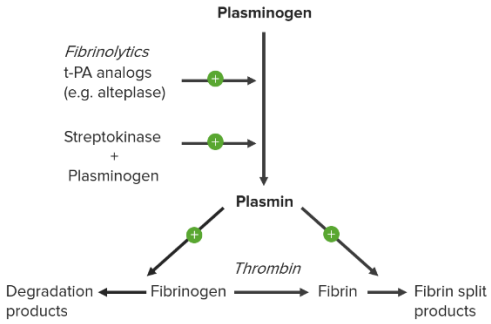
A. Fecooral
B. Blood
C. Materno fetal
D. Respiratory droplets

Ans. D

Q196. Thrombolytics act via:

A. Fibrin
B. Fibrinogen
C. Plasminogen

Ans. C



Q197. Fumigation is done in case of:

A- In wards where a patient of plague was admitted
B- 5 confirmed cases of dengue
C- Cardiac surgery O.T where increased incidents of post Op infections reported
D- H1N1 (Influenza)

Ans: D (If D is not in options go with C)

Q198. Which laryngeal muscle dampens the voice?

A- Posterior Cricoarytenoid
B- Thyroarytenoid
C- Cricothyroid
D- Vocalis
E- Oblique arytenoid

Ans: B > D

Explanation:

Actions	Muscle Involved
Abductor of Vocal cord or open Glottis	Posterior Cricoarytenoid
Adductor of Vocal cord or Close Glottis	Lateral Cricoarytenoids(main) Transverse Arytenoids(main) Thyroarytenoids Cricothyroid
Tense Vocal Cord	Cricothyroid
Relax Vocal Cord	Thyroarytenoid Vocalis
Open Larynx Inlet	Thyroepiglotticus

Close Inlet	Larynx	Aryepigloticus Oblique Arytenoid

Q199. Doctor advised a patient to increase intake of whole wheat bread. The patient is most likely deficient in which of the following:

A- Riboflavin
B- Thiamine
C- Niacin
D- B12
E- Ascorbic acid

Ans: B

Q200. Most common adverse effect of cimetidine?

A. Anti-androgenic (gynecomastia)
B. Nausea
C. Diarrhea
D. Vertigo

Ans. A

Q201. A patient present with Ataxia on closing eyes/ patient sways with eyes closed lesion in:

A- Cerebellum
B- Cerebellar peduncle
C- DCML
D- Left internal capsule
E- Cortex

Ans: C

Explanation:

✓ Patient fall on close eye only (Positive Romberg) – DCML lesion
✓ Patient fall on open and close eye – Cerebellum lesion

Q202. Plasma half life of a drug depends on its:

A. Rate of clearance
B. Volume of distribution

Ans. A

Remember:

✓ Volume of distribution = Bioavailability
✓ Plasma half-life = Rate of drug clearance

Q203. Nerve supply of fibrous pericardium:

A. Phrenic nerve
B. Cardiac plexus
C. Vagus nerve

Ans. A

Remember:

Nerve supply of pericardium

1. Visceral pericardium ie supplied by cardiac plexus (vagus nerve)
2. Fibrous and parietal layer By Phrenic and Intercostal nerve
3. Whole percardium By Cardiac plexus, Intercostle And Phrenic nerve

Arterial supply of pericardium:

Parietal pericardium = Pericardiophrenic artery
Epicardium = Coronary artery

Q202. Immediate/fast effect in cold:

A. Piloerection
B. Shivering
C. Inc physical activity
D. Release of catecholamine

Ans. A

Q203. Fluent speech makes no sense, where could the lesion be?

A. Broca's area
B. Angular gyrus
C. Wernickes area (fluent aphasia)

Ans. C

Remember this regarding aphasia

Motor Aphasia

Lesion of Broca Area (Dominant) 44 and 45
Lesion of Inferior Frontal Lobe
Expressive or Non Fluent Aphasia
Cannot Speak or Write
Comprehension Intact

Sensory Aphasia

Lesion of Wernike area 22
Lesion of Superior temporal Lobe
Receptive or Fluent Aphasia
Can Speak but make No sense

Anomic Aphasia

Lesion of Angular Gyrus area 39
Lesion of Non Dominant Broca Area
Lesoion of Arcuate Fasciculus
Mild Fluent Aphasia
Cannot express the words they want to use

Global Aphasia

Lesion of Broca and wernike area

Q204. Tongue deviation to left side which muscle is responsible?

A. Rt. hyoglossus
B. Left hyoglossus
C. Rt genioglossus
D. Left genioglossus

Ans. C

Remember: Genioglossus is supplied by CNXII

Q205. Ophthalmic vein enters cavernous sinus through?
A. Superior orbital fissure
B. Jugular foramen
C. Foramen of Monroe
D. Foramen cecum

Ans. A

Remember:
Superior orbital fissure gives passage to multiple structures, including the oculomotor nerve, trochlear nerve, ophthalmic nerve, abducens nerve, ophthalmic veins, and sympathetic fibres from the cavernous plexus.

Q206. Which supplement to be given post antibiotic therapy?
A. Vit. A
B. Vit. D
C. Vit. E
D. Vit. K

Ans. D

(Because some antibiotics damage the normal gut flora which synthesizes Vit. K)

Q207. Which is the nerve supply for salivary gland secretion?
A. Facial N
B. Hypoglossal N
C. Glossopharyngeal N
D. Vagus N

Ans. A

Remember: Increase Salivary Flow – **Cranial Nerve 7 > 9**

Q208. A patient with asthma and allergic aspergillosis, rise of which Ig will be seen?
A. IgA
B. IgE
C. IgG
D. IgM

Ans. B

Q209. 26 year old boy present with pallor and weakness also having fever of 101F bruises and petechia present definitive diagnosis will made on:
A- Serology
B- CBC
C- Bone marrow aspiration
D- Molecular biology
E- Factor 2

Ans: C

Q210. Which of following found Abundant in earth crust and cause pulmonary fibrosis?
A- Silica
B- Carbon
C- Nitrogen
D- Urea

Ans: A

Q211. Germinal centers are in:
A. Cortex of lymph node
B. Medulla of l node
C. Thymus
D. Spleen

Ans. A

Q212. Which one of following does not affect uptake of radioactive iodine:
A. Tsh
B. T3. T4
C. Dietary iodine
D. Calcitonin

Ans. D

Q213. Right atrium infarction involves which of following?
A- Septomarginal band
B- Moderator band
C- Pectinate muscle
D- Papillary muscle
E- Trabeculae

Ans: C

Q214. Patient came with of skin rash and urticaria, history of diphtheria (DPT) vaccine few days back type of hypersensitivity will be:
A- Type 1
B- Type 2
C- Type 3
D- Type 4
E- Type 1+2

Ans: C

Q215. Endothoracic surgeon placed prosthetic heart valve. After 1 year patient developed endocarditis. The organism inoculated shows to be coagulase negative. What is the organism?
A- E. coli
B- S Aureus
C- S Viridian
D- H infleunza
E- Streptococus

Ans: C

Explanation:

- ✓ Most common cause of acute endocarditis (no heart disease) – Staph Aureus
- ✓ Most common cause of Sub Acute Endocarditis (with heart disease) – Strep. Virdian

Q216. Regarding mitochondrial DNA:

A. Maternal origin
B. Paternal origin
C. Both maternal and paternal origin

Ans. A

Q217. What type of wave will be seen on EEG while giving viva or solving math problems?

A- Alpha waves
B- Theta waves
C- Beta waves
D- Delta waves

Ans: C (FA + Guyton + Ganong)

Explanation:

- ✓ If asked "a person was angry and under stress after an argument with his boss which brain waves will be seen" then choose "theta waves"
- ✓ Awake and open eyes
- ✓ Awake and Eye Close: Alpha Wave
- ✓ Awake and Eye open: Beta Wave
- ✓ N1: Theta Wave (4-7Hz)
- ✓ N2: Sleep spindles (12-14Hz) and K complexes (High Voltage biphasic waves)
- ✓ N3&4: Delta Wave (0.5-4Hz) – Low Frequency and High Voltage Wave
- ✓ Theta wave may occur during Stress, N 2 &3 but Predominantly in N1
- ✓ Delta Wave occur during Deep sleep, Infancy and Organic Brain Disease
- ✓ Spindle may Occur During N1 but Predominantly in N2

Q218. The Sick role (patient role) involves:

A. Being excused from various obligations
B. Being blamed for being ill
C. Commitment to get unwell
D. Commitment to not follow medical advice
E. Commitment to not take treatment

Ans. A

Q219. Patient with CA of lateral side of anterior 2/3rd of tongue, what is the lymphatic drainage?

A- Julglo-omohyoid
B- Digastric
C- Submandibular
D- Submental

Ans: C

Explanations:

- ✓ Anterior 2/3rd Tongue –Submandibular
- ✓ Posterior 1/3rd Tongue – Jugulo omohyoid.
- ✓ Tip of Tongue – Submental

Q220. A baby presented with fistula at lateral aspect of neck anterior to SCM, likely remnant of:

A. 2nd branchial pouch
B. 2nd pharyngeal cleft
C. 2nd brachial arch

Ans. B (branchial cleft fistula)

Q221. Scenario of history of maxillary fracture wiring done, 3 years after the procedure patient presented with Pus/abcess what will be the organism found in this abscess?

A. S. aureus
B. S. virdians
C. S. pneuminae

Ans. A

Q222. Mother brought her child with language problem; he speaks well, has good auditory perception but cannot conjure words, lesion in:

A. Angular gurus
B. Arcuate fasciculus
C. Hesse gyrus

Ans. B

Remember:

- ✓ Broca area lesion is when you understand well but unable to speak (B for Broca, B for Bol nahi sakta)
- ✓ Wernicke area lesion is when you don't understand anything but talk useless.
- ✓ Conduction Aphasia is when you understand well , you speak well but you can't repeat any word (Arcuate Fasciculus lesion).

Q223. A female patient underwent C Section 3 months back. Her wound is not healing properly. She is taking diet rich in proteins and carbohydrates but deficient in fruits and vegetables. What vitamin Deficiency cause poor wound healing?

A- Decrease Tensile Strength of Wound
B- Decrease Vitamin C

C- Decrease Vitamin K
D- Decrease Synthesis of Type II Collagen
E- Decrease Vitamin B
Ans: B

Q224. Patient is having rhinosinusitis and nasal polyp with the fungus invading lamina papyracea, excessive endothelial damage and having non septate hyphae organism involved is:
A- Candida
B- Histoplasmosis
C- Aspergillus
D- Mucor
E- Rhizopus
Ans: D (FA)
Explanation:
Mucor and Rhizopus
Diabetic (DKA) and Neutropenic (Leukemia)
Rhinosinusitis
Non septate hyphae branch at wide angle
Invade blood vessel
Aspergillus
Non diabetic
Immuno compromised and neutrophilic dysfunction (CGD)
Rhinosinusitis
Septate hyphae branch at acute angle
Candida
Diamorphic
Pseudohyphae
Cryptococus
Not Diamorphic
5-10 um narrow budding
Brain meningitis and Encephlitis(Soap bubble lesion) in immunocompromised
Histoplasmosis
Reticuloendothelial System involve

Q225. Epithelium of vestibule of nose:
A. Keratinized stratified squamous epithelium
B. Ciliated Columnar epithelium
Ans. A

Q226. Inhibition of inspiration is by:
A. Dorsal respiratory group
B. Ventral respiratory group
C. Pneumotaxic center
D. Apneustic center
Ans. C
Explanation:
1) Medullary respiratory center located in reticular formation
A) Dorsal respiratory group
It is primarily responsible for inspiration and generates the basic rhythm for breathing
Input to the dorsal respiratory group comes from the vagus and glossopharyngeal
nerves. The vagus nerve relays information from peripheral chemoreceptors and
Mechanoreceptors in the lung. The glossopharyngeal nerve relays information.
from peripheral chemoreceptors
Output from the dorsal respiratory group travels, via the phrenic nerve, to the diaphragm.
B) Ventral respiratory group
It is primarily responsible for expiration and not active during normal, quiet breathing, when expiration is passive
It is activated for example during exercise, when expiration becomes an active process.
2) Apneustic center
is located in the lower pons.
It stimulates inspiration, producing a deep and prolonged inspiratory gasp (apneusis).
3) Pneumotaxic center
It is located in the upper pons.
It inhibits inspiration and, therefore, regulates inspiratory volume and respiratory rate.

Q227. In grade 3 carcinoma how many cells remain undifferentiated?
A- 5%
B- 25%
C- 70%
D- 85%
E- All
Ans. C (50-70% undifferentiated)

Q228. The strongest inhibitory signal in central nervous system comes from which neuron?
A- Substansia nigra
B- Pyramidal cells of cerebral cortex
C- Purkunji cells of cerebellar cortex
D- Bipolar cells of Cerebellum
Ans: C
(Do not confuse between cerebellar and cerebral)

Q229. Which of the following is a structural component of cilia?
A. Central microtubule (axoneme)
B. Kinin arms
C. Histaminase

D. Dystrophin protein

Ans. A

Remember:

Axoneme of cilia has how many microtubules = 20

Movement of cilia is due to = Microtubules

Q230. Thoracic duct drain in which of following?

A- Internal jugular vein

B- Junction of azygous vein and superior vena cava

C- Angle between Left internal jugular vein and Left subclavian vein

D- Brachiocephalic vein

E- External jugular vein

Ans: C

Explanation:

Thoracic duct empties into

Venous system near union of left internal jugular vein and left subclavian vein

Left venous angle

Origin of left brachiocephalic vein

Q231. Cell junctions allowing exchange of cytoplasmic molecules between two cells are called:

A. Gap junctions

B. Tight junctions

C. Desmosomes

Ans. A

Q232. Achalasia is due to:

A. Loss of myenteric plexus

B. Loss of meissner's plexus

Ans. A

Q233. Mucosal layer of tympanic membrane has which cells?

A. Squamous epithelium

B. Columnar epithelium

C. Cuboidal epithelium

Ans. B

Q234. Highest mortality of which strain of hepatitis?

A. Hep. A

B. Hep. C

C. Hep. D

D. Hep. B

Ans. C

Q235. Gain of control of homeostasis is by:

A. Negative feedback

B. Positive feedback

C. Hormones

Ans. A

Q236. Origin of "stapedius" is from:

A. 1st pharyngeal arch

B. 2nd pharyngeal arch

C. 3rd pharyngeal arch

D. 6th pharyngeal arch

Ans. B

Q237. Thymus is derived from:

A- 1st pharyngeal pouch

B- 2nd pharyngeal pouch

C- 3rd pharyngeal pouch endoderm

D- 3rd pharyngeal pouch ectoderm

Ans: C

Explanation:

1st pouch derivative:

Middle Ear cavity

Mastoid air cell

Eustachian tube

2nd pouch derivative:

Palatine tonsile epithelial lining

3rd Pouch derivate:

Ventral Wing – Thymus

Dorsal Wing – Inferior Parathyroid

4th pouch derivative:

Ventral Wing – Ultimopharyngeal body, Parafollicular C cells of thyroid

Dorsal Wing – Superior Parathyroid

Q238. Ischio-pubic ramus fuse at the age of:

A. 7 years

B. 1 years

C. 24 years

D. 21 years

Ans. A

Q239. Erection occurs due to which of following?

A- Pudendal nerve

B- Sympathetic

C- Parasympathetic

D- Obturator nerve

Ans: C

Explanation:

- ✓ Over all ejaculation – Pudendal nerve >Sympathetic
- ✓ Ejaculation two parts
- ✓ Emission – Sympathetic
- ✓ Ejection – Pudendal
- ✓ Erection – Parasympathetic

Q240. IUCD removed, cells seen were lymphocytes, macrophages and neutrophils.

A. Chronic inflammation

B. Acute inflammation
C. None of the above

Ans. A

Q241. Water absorption from PCT:
A. 10-20%
B. 30-50%
C. 65-70%
D. 90-100%

Ans. C

Q242. Gene related to medullary CA of thyroid:
A. BRCA
B. APC
C. RET

Ans. C

Q243. Most common malignancy of thyroid?
A. Papillary CA
B. Follicular CA
C. Medullary CA
D. Anaplastic CA

Ans. A

Explanation:

Papillary CA
Associated with radiation
Psamomma bodies and orphan anie eye nucleus
Slow growing
Spread via lymphatic
Best prognosis

Follicular CA
Invade Capsule
Vascular Spread
2nd Best Prognosis

Medullary CA
Release calcitonin
MEN 1 and men 2 associated
Poor prognosis

Anaplastic CA
Very poor prognosis
Highly undifferentiated

Q244. Scenario of lymphoma diagnosed, next investigation?
A. Cytology
B. Immunohistochemistry
C. Cell smear

Ans. B

Q245. Coagulase negative rod, no visible area around vancomycin:
A. Actinomycetes
B. Listeria
C. Nocardia
D. Bacillus
E. Corynebacterium

Ans. A

Q246. Small amount of blood loss for a long period:
A. Macrocytic hypochromic anemia
B. Normocytic normochromic anemia
C. Microcytic hypochromic anemia

Ans. C

Q247. Bronchogenic carcinoma is caused by:
A. HPV
B. CMV
C. HZV
D. EBV

Ans. B

Q248. A pt of TB on ATT, combination of drug is given due to:
A. To inc resistance against bacteria
B. To inc effectiveness of drug
C. To prevent recurrence of infection
D. To reduce side effects

Ans. B

Remember:
To decrease resistance against bacteria and increase effectiveness.

Q249. What is Benedict test used for?
A. To detect sugar in urine
B. To detect reducing agents in urine
C. For dyslipidemias
D. Hydrogen bonding

Ans. B

Q250. Afferent taste pathways from root of tongue relays at:
A- Lingual nerve joins trigeminal nerve
B- Nerve goes to inferior cerebral peduncle to cerebellar tract
C- Sensation travels through the peripheral axon to tractus soliterius
D- Glossopharyngeal nerve carries to spinal nucleus of trigeminal

Ans: C

Q251. In hereditary spherocytosis defective protein is which of following?
A- Fibrillin
B- Titin
C- Dystrophin
D- Spectrin
E- Ankyrin

Ans: D

Q252. Generalized edema due to:

A. Hypoprotenemia
B. Cardiac failure
C. Hyperprotenemia
D. Hyponatremia

Ans. A

Q253. Most common complication of AIDS:

A. Pneumocystis jirovecci
B. TB
C. Measles
D. Meningitis

Ans. A

Remember:

- ✓ Initial Test – **ELISA**
- ✓ Confirmatory Test – **Western Blot**
- ✓ In children Confirmatory – **PCR**
- ✓ Hall mark of HIV – **Proliferation of Virus in T Cell**
- ✓ Hall mark of AIDS – **Progressive Immunodeficiency (Decrease CD4 Count)**
- ✓ Most common opportunistic infection in – **HIV is TB**
- ✓ Most common opportunistic infection in – **AIDS Pneumocystic Jiroveci**
- ✓ Follow up is done by – **CD4 Count**
- ✓ Progression from asymptomatic to Symptomatic stage can be assessed by – **PCR**

Q254. Fungus resistant to echinocandin group:

A. Aspergillus
B. Blastomyces
C. Candida albicans
D. Histoplasma

Ans. C

Q255. Oculomotor nerve lesion can be due to aneurysm of which artery?

A. ACA
B. AICA
C. Posterior communicating artery
D. Posterior cerebellar artery

Ans. C

Q256. Alpha adrenergic stimulation causes:

A- Cardiac stimulation
B- Bronchodilation
C- Pupillary dilation
D- Vasodilation
E- Increase activity of gut

Ans: C

Explanation:

Sympathetic

Cause radial muscle contraction result in Mydriasis or Dilation of Pupil (A1)
Dilate ciliary muscle (Far vision)

Parasympathetic (M Receptor)

Act on circular sphincter muscle cause constriction or meiosis of Pupil
Contract ciliary muscle (Near vision)

Q257. Autoimmune disease only related to one organ is:

A- Celiac disease
B- Berger's disease
C- RA
D- Hashimoto disease
E- Autoimmune hemolytic anemia

Ans: D

Q258. Abnormal looking child, hypertelorism with oblique palpebral fissure and ectropion on eyelid diagnosis?

A. Trisomy21
B. Crouzen syndrome
C. Kleinfelters
D. Trisomy 18

Ans. A

Q259. Hormone which increased secretion in dark and causing hypogonadism?

A- Cortisol
B- GH
C- Melatonin
D- FSH
E- LH

Ans: C (Ganong +Guyton + BRS)

Explanation:

Darkness – Melatonin
Deep Sleep – GH & Prolactin
Early Morning – Cortisol

Q260. Sublingual nitroglycerin absorbed immediately in:

A- Lingual vein
B- Sublingual vein
C- Deep lingual
D- Submental

Ans: B

Q261. Which of the following stimulate RBC growth?

A. IL2
B. IL6
C. IL3
D. IL1

Ans. C

Remember: RBC (1+1+1) = 3 so IL3

Q262. Data in percentages is represented by:
A. Pie chart
B. Bar chart
C. Flow chart
Ans. A

Q263. Abscess containing sulphur granules is caused by:
A. S. aureus
B. Brucellosis
C. Actinomycosis
D. Amebiasis
E. Histoplasmosis
Ans. C

Also know:

Q. Which of following is most prominent constituent of sulfur granules of actinomycosis?
A. Eosinophils
B. Monocytes and lymphocytes
C. Organism
D. Neutrophils
Ans. C

Q264. Kidney transplant was done in a patient and thrombosis and cyanosis occurred immediately:
A- Cytotoxic T cell rejection
B- Graft vs host disease
C- Non immune vascular disease
D- Antibody mediated rejection
E- Type 4 Hypersensitivity
Ans: D (FA)

Explanation:
Hyper acute Rejection – Pre formed antibodies (Type 2 Hypersensitivity)
Acute Rejection – CD8 Cells (Type 4 Hypersensitivity)
Chronic Rejection – CD4 Cells (Type 2+4 Hypersensitivity)
Graft vs Host Disease – Type 4 Hypersensitivity

Q265. Kidney transplant was done in a patient and after six months transplant was rejected. What is the cause?
A. Acute rejection ✔ If reversible with immunosuppression.
B. GVHD
C. Chronic rejection ✔ If not reversed by immunosuppression.
D. Type IV hypersensitivity reaction
Ans: ?

Q266. Out of local anesthetic agents, maximum protein binding shown by:
A. Lidocaine
B. Prilocaine
C. Bupivacaine
Ans. C

Q267. A middle aged man consulted the doctor for a lesion on his nose that was flesh coloured, about 1cm in diameter with rolled edges nd central ulceration. Most likely diagnosis:
A. SCC
B. BCC
C. Acne vulgaris
D. Actinic keratosis
Ans. B

Q268. Post splenectomy infection organisms:
A. Pneumococcus
B. Meningococcus
C. H.influenza
D. Encapsulated bacteria
Ans. A (all but prefer Pneumococcus > H. Influenza > Neisseria meningitides)

Postsplenectomy findings:
Howell-Jolly bodies (nuclear remnants)
Target cells
Thrombocytosis (loss of sequestration and removal)
Lymphocytosis (loss of sequestration)
Increase Risk of infection by encapsulated organisms (pneumococci, Hib, meningococcal).

Q269. Patient with increase sweating, palpitations and weakness. Overnight lab results revealed hypoglycemia, increase serum insulin levels and increase C peptide. Cause?
A. Insulinoma
B. Insulin administration
C. Carcinoid syndrome
Ans. A

Q270. DM, skin pigmentation, liver cirrhosis (hemochromatosis). Lab finding?
A. Decreased iron decreased TIBC
B. Increased iron decreased TIBC
C. Decreased iron increased TIBC
Ans. B

Q271. Scenario of liver pathology slide shows vacuoleated cell no staining in wright stain. Most likely?
A. Steatosis

B. Bacterial invasion
C. Viral infection

Ans. A

Q272. X linked recessive disease occurs in male. Why?
A. Heterozygous x linked
B. Hemizygous x linked
C. Homozygous x linked
D. Homologous x linked

Ans. B

Q273. Which of the following has shortest half-life?
A- ACTH
B- TRH
C- Oxytocin
D- GnRH
E- GH

Ans: D

Q274. Post surgical DVT cause:
A. Tachycardia
B. Exercise
C. Immobilization

Ans. C

Embolism/DVT

Most common source of emboli – **femoral vein**
Most common site of DVT –**Popliteal vein**
Most common cause – **Immobilization**
D dimers – **Sensitive for DVT**
FDP – **Specific for DVT**

Q275. CNS tumour with fibrillary proteins:
A. Meningioma
B. Acoustic neuroma
C. Astrocytoma

Ans. C

Note: Fibrillary astrocytomas are predominantly composed of **a tumor matrix rich with neuroglial fibrils**
The glial fibrillary acidic protein (GFAP) is a classical marker of astrocytoma

Q276. P wave is not related to QRS in:
A. RBBB
B. AV nodal delay
C. Fast firing of SA node
D. 3rd degree AV block

Ans. D

Q277. Frank starling theory, force of contraction depends upon:
A. Change in length of ventricular muscle fiber
B. Increase calcium influx
C. Increase force of contraction

Ans. A

Q278. Insulin release increased by:
A. Secretin
B. Thiazide
C. Somatostatin

Ans. A

Q279. Asbestosis increases the risk of:
A. SCC
B. BCC
C. Mesothelioma
D. Bronchogenic CA

Ans. D

Remember: Bronchogenic CA > Mesothelial carcinoma

Q280. Duchenne muscular dystrophy defective gene makes the cell impermeable to which of the following?
A. Amino acid
B. Water
C. Electrolytes
D. Protein

Ans. D

Q281. Cause of vasodilation in spider nevi:
A. Estrogen
B. Testosterone
C. Hepatotoxins
D. FSH

Ans. A

Q282. Which of the following is not a feature of irreversible cell injury?
A. Myelin figures
B. Karyolysis
C. Karyorrhexis
D. Mitochondrial shrinkage

Ans. D

Q283. 48 yo lady has CA cervix that has involved the cervix and the vagina but not it's lower third and has not extended onto pelvic walls. It is in which of the following diagnosis?
A. Adenocarcinoma
B. Squamous cell CA
C. Embryonal CA

Ans. B

Q284. Which of the following is autosomal dominant?
A. PKU
B. Hereditary spherocytosis

C. Hemophilia A
D. Cystic fibrosis

Ans. B

Q285. At which point in ECG more CA ions enter into ventricular muscle?
A. ST segment
B. P wave
C. R wave
D. PR interval

Ans. A

Q286. DPPC (lecithin) + lipids +proteins is a content of which substance?
A. Surfactant
B. Glomerular secretion
C. Breast milk

Ans. A

Q287. Which protein is involved in bicarbonate chloride shift in RBC?
A. Band 3
B. Ankyrin
C. Spectrin

Ans. A

Q288. Which of the following is true regarding saliva?
A. Normally acidic in pH
B. Normally alkaline in pH
C. Has less Na and K than plasma
D. Hypertonic compared to plasma

Ans. A

Q289. What is true about gap junctions?
A. Absent in cardiac muscles
B. Present in cardiac and smooth muscles
C. Absent in smooth muscle
D. Present in skeletal muscle

Ans. B

Q290. Which of the following controls prolactin secretion?
A. Prolactin releasing hormone
B. Prolactin inhibiting hormone
C. GnRH

Ans. B

Q291. Child presented with decreased breath sounds and chest movement on left side which is improved on holding him up. CXR revealed coils of intestine on left side of chest. Cause of congenital diaphragmatic hernia is:
A. Absence of pleuropericardial membrane
B. Absence of septum transversum
C. Incomplete pleuroperitoneal membrane

Ans. C

Q292. A foundry worker comes with dyspnea, exaggerated by exertion, cough, often persistant and sometimes severe tachypnea which is often labored. Loss of appetite and weight loss present. What is the mechanism of the disease?
A. Macrophages laden with carbon
B. Foreign body giant cell formation
C. Caseating necrosis

Ans. B

Q293. During defecation sensation of rectal distention is carried by:
A. Sacral parasympathetic nerves
B. Autonomic activation
C. Sympathetic activation
D. Myenteric plexus

Ans. A

Q294. Which of the following are both an antiapoptotic factor and a tumour suppressor gene?
A. RAS
B. BCL2
C. ABL
D. AFP

Ans. B

Q295. While performing Ziehl Neelson staining, the pathologist forgot to add alcohol to sputum sample. What will happen now?
A. Bacteria in background looks blue
B. Bacteria in background looks red
C. Bacteria dewash on smear
D. Bacteria disappear on smear

Ans. B

Also know:

Q. A person working in an abattoir presented with a papule on hand, which turned into an ulcer. Which will best help in diagnosis?
A. Trichrome methylene blue (Cutaneous anthrax)

Q. Mycobacteria stain with:
A. ZN stain
B. Carbolfuchsin
C. Auramin rhodamin
D. All of above

Ans. D

Q. Ziehl-Neelsen staining is used to diagnose:

A. Methicillin resistant Staphylococcus aureus (MRSA) infection.
B. Acid-fast tubercle bacilli infection.
C. Neisseria meningitidis infection.
D. Clostridium perfringens infection.

Ans. B

Remember:

- ✓ Gonnococcus – Gram stain
- ✓ Malaria – Giemsa stain
- ✓ Most common stain for bacteria – gram stain
- ✓ Initial test for TB – CXR
- ✓ Cryptococcus – India ink stain

Q296. Stratified squamous epithelium is present in?

A. Nasal cavity
B. Subglottis
C. Trachea
D. Epithelium of parotid duct

Ans. B

Remember:

- ✓ Nasophayrnx = pseudostratified
- ✓ Oropharynx =stratified
- ✓ Epiglottis=stratified
- ✓ Subglottis = pseudostratified
- ✓ Trachea =pseudostratified
- ✓ Duct of parotid glands= Stratified

Q297. Organ with simple cuboidal epithelium filled with follicles:

A. Thyroid
B. Adrenal gland
C. Kidney
D. Liver

Ans. A

Q298. A child coming from village where there is improper sanitation he will have which hepatitis?

A. Hep. D
B. Hep. E
C. Hep. A
D. Hep. C

Ans. B

Q299. A patient was transfused blood and he developed reaction within 10 minutes cause is:

A- Cytotoxic T cell rejection
B- Graft vs host disease
C- Non immune vascular disease
D- Antibody mediated rejection
E- Type 4 Hypersensitivity

Ans: D (FA)

Explanation:

Hyper acute Rejection – Pre formed antibodies (Type 2 Hypersensitivity)
Acute Rejection – CD8 Cells (Type 4 Hypersensitivity)
Chronic Rejection – CD4 Cells (Type 2+4 Hypersensitivity)
Graft vs Host Disease – Type 4 Hypersensitivity

Q300. Eosinophilia does not occur in:

A. Hookworm infection
B. Pinworm infection
C. Allergic asthma
D. SLE

Ans. D

Q301. A medical student is examining a slide under the microscope but he is unable to differentiate the gallbladder different from the colon; the point which will help him in differentiating the gallbladder from colon histologically will be?

A. Muscular layer arranged in 3 layers in the gallbladder wall
B. Columnar epithelium in gallbladder wall
C. Peyer's patches in the gallbladder wall
D. No submucosa in the gallbladder wall
E. No serosa in the gallbaldder wall

Ans. D (There is no muscularis mucosae/submucosa in GB)

Also know:

Which layer is absent in tunica intima of an artery = external elastic lamina

Q302. Most specific for acute hepatitis:

A. ALT
B. AST
C. GGT

Ans. A

Q303. Factory worker motor peripheral neuropathy:

A. Lead
B. Zinc
C. Magnesium

Ans. A

Q304. Patient with a lesion on distal shaft of penis most definite lab test:

A. TPA
B. Dark field microscopy
C. FAS AB
D. VDRL

Ans. B

(Biopsy with darkfield illumination is the diagnostic test of choice for primary syphilis i.e. with chancre KAPLAN)

But if asked:

Q. Best confirmatory serological test for syphilis is:

A. VDRL
B. TPPA
C. TPHA
D. FTA-ABS

Ans. D

Q305. Heating in steam at 100C for 20 minutes on 3 consecutive days:

A. Autoclaving
B. Pasteurization
C. Tyndilization
D. Steaming

Ans. Tyndilization > Insissipation

Q306. 2 year old boy came with complain of lethargy poor slow movement how will you diagnose

A. Thyroid profile
B. TSH with metabolic enzyme
C. Cortisol level

Ans. A

Q307. A student was given a slide of oral tissue. He observed a finger like process that was covered by stratified squamous epithelium and has a core of dense irregular connective tissue. What is the most likely structure?

A. Circumvallate papillae
B. Fungiform papillae
C. Filliform papillae
D. Palatine tonsil
E. Lingual tonsil

Ans. C

Remember:

Filliform – Finger shaped
Fungi form – Mushroom shaped

Q308. Stratified squamous epithelium is on:

A. Circumvallate papilla
B. Palatine tonsils
C. Uvula

This is controversial, as both B and C have stratified squamous epithelium.

Ans. Prefer B > C

Q309. A 35-year-old G4P3 at 35 weeks gestation presents to the emergency room with nausea, vomiting, headache, and right upper quadrant pain. She has a history of pre-eclampsia in her previous pregnancy. On physical exam, she is noted to be dry mucous membranes and mild periorbital edema and bluish spots on skin. Her blood pressure is 180/90 mmHg. Laboratory testing shows elevated liver enzymes, increased lactate dehydrogenase, and decreased platelets. She is started on steroids, intravenous magnesium sulfate, and prepped for immediate delivery. What is the diagnosis?

A. TTP
B. HUS
C. HELLP syndrome
D. DIC

Ans. C

Q310. Lipoprotein with highest cholesterol is:

A- HDL
B- LDL
C- VLDL
D- IDL
E- Chylomicron

Ans: B

Explanation:

Lipoprotein with highest triglyceride:
Chylomicron > VLDL > Chylomicron remnants > LDL

Lipoprotein with Highest Cholesterol:
LDL > VLDL > HDL > Chylomicron

Lipoprotein with Highest Protein:
HDL > LDL > VLDL > Chylomicron

Q311. A 33-year-old Pakistani man presents to his primary care physician for a cough and generalized malaise. His symptoms are associated with 2 episodes of mild hemoptysis, night sweats and low grade fever. He denies any sick contacts or recent travels; however, he states he was released from prison 4 months ago. Physical examination is unremarkable. A chest radiograph is obtained, which demonstrates pulmonary infiltrates and cavitations in the upper lobe. On histology caseating granulomas, epithelioid cells and macrophages are seen. What is the diagnosis?

A. Mycobacterium tuberculosis
B. Sarcoidosis
C. Asthma

Ans. A

Q312. A 4-year-old girl presents to the emergency room for a fever and sore throat. She recently visited Thailand for 2 months with her parents and had just flown back a couple of days ago. Her parents report that she has not had any of her recommended immunizations, as they have traveled all over the world. On physical exam, there is a grayish-white membrane covering her soft palate. When irritated by a tongue depressor, the membrane oozes with blood. She also has marked cervical lymphadenopathy and edema of the neck. She is immediately admitted for monitoring, antibiotics, and antitoxin. What is the diagnosis?

A. Blood culture
B. Throat or skin swab for smear and culture
C. Sputum test

Ans. C

Remember:

Q. Immediate or emergency diagnosis of diphtheria bacilli is done by:

Gram staining

Q. Diagnosis of diphtheria best made by culture in:

A) Loeffler's media
B) Tellurite media

Ans. A > B (FA)

Q313. 3 months old baby presented with critical ill condition..PH 7.2, PcO_2 32, HCO_3 14, Na 142, k 2.5 daignosis:

A. Renal tubular acidosis
B. Hypothyroidism
C. Addison's disease
D. Kleinfelter's syndrome

Ans. A

Q314. Most sensitive test for the screening of SLE is?

A- ANA
B- Anti-Ds DNA
C- Anti sm ab
D- AMA Ab
E- Complement levels

Ans: A

Q315. 50 years old patient developed Chest pain for 6 hours, not relieved by nitrates, bp 110/70, pulse 100bpm, what's next best investigation to do?

A- CPK
B- CKMB
C- Trop
D- CBC
E- LDH

Ans: C

Explanation:

✓ Best Initial Investigation of choice – ECG
✓ 1-2 hr – Myoglobin
✓ Within 4hr – CK MB
✓ After 4hr – Trop
✓ Sensitive – Trop T
✓ Specific – Trop I

Q316. Shaft of hair at follicle composed of:

A. Stratum basalis
B. Stratum corneum
C. Cortex of hair

Ans. C

Q317. Down's syndrome has increased risk of:

A. ALL
B. CLL
C. CML
D. AML

Ans. A

Q318. A 29 year old female presents with lethargy and irritability for the last 5 years. Labs reveald Hb 9.6, mcv 70 and low Mchc with normal wbc and plt count. She was prescribed iron supplements yet after 2 months she has Hb 10. Which lab should be ordered to finf underlying cause of persistent anemia:

A. TIBC
B. HB electrophoresis
C. Retic count
D. Ferritin levels
E. Bone marrow

Ans. B

Q319. Anemic patient, Hb 6.2, platelets 450000, TLC normal range, bone marrow shows erythroid hyperplasia:

A. Acute blood loss
B. Leukemia
C. Iron deficiency anemia

D. Anemia of CRF

Ans. C

Q320. Old age, fatigue, no imp finding on physical examination, MCV 89, segmented cells, band cells, metamyelocytes, diagnosis?

A. Chronic blood loss
B. CML
C. CLL
D. Malnourished

Ans. C

Q321. Some candidates recall this question as blood film given metamyelocytes band cells lymphocytes, hb low mcv 96fl:

A. Chronic blood loss
B. Metastatic Ca

Ans. B (CLL)

Q322. After multiple blood transfusion which occur?

A. Hypokalemia
B. Hyperkalemia
C. Hypocalcimia

Ans. If hemochromatosis is not in options prefer C

Remember:

✓ Repeated blood transfusion – hypocalcemia
✓ Multiple blood transfusion – hemochromatosis
✓ Massive blood transfusion – hyperkalemia

Q323. A lady presents with recurrent abortion in Gynae OPD which Antibody should be tested for her condition?

A- Anti SSA
B- Anticardiolipin antibody
C- Anti SSB
D- ANA
E- Anti Smith

Ans: B

Explanation:

Antiphospholipid syndrome causes recurrent abortion characterized by following three antibodies.

1-Lupus anticoagulant
2-Anticardiolipin antibody
3-Anti Beta 2 Glycoproteins-l antibody

Q324. A 29-year-old male went to remote area and developed mild watery foul smelling diarrhea which resolved in 2 weeks spontaneously:

A. Rota virus
B. Giardia
C. E.coli

Ans. B

Q325. Organism causing rice water diarrhea:

A. Giardia
B. Vibrio cholera
C. E. coli
D. Rota virus

Ans. B

Q326. In a patient of drowning what will be found?

A. Metabolic acidosis
B. Respiratory acidosis

Ans. A

Q327. Patient with severe vomiting and diarrhea for 1 day, presented with tachypnea and respiratory rate 22 with hypotension. Labs showed hypochloremia, hyponatremia, and hypokalemia with normal bicarb. What is the diagnosis?

A. Metabolic acidosis
B. Metabolic alkalosis
C. Respiratory acidosis
D. Respiratory alkalosis
E. Renal tubular acidosis

Ans. A

Q328. A patient having bronchial asthma attack hypercapnia, ph is 7.23 bicarb was 26meg/L?

A. Respiratory acidosis
B. Metabolic acidosis or
C. Respiratory alkalosis
D. Metabolic alkalosis
E. Uncompensated metabolic acidosis

Ans. A

Q329. A man died on autopsy black hilar lymph node due to:

A. Lipofuscin
B. Anthracosis
C. Hemosiderin
D. Carbon

Ans. B

Q330. A 26-year-old woman, 5 days post vaginal delivery, presents to her child's pediatrician with a complaint that she is unable to breast feed her child. History reveals a vaginal delivery complicated by postpartum hemorrhage. What can be the cause?

A. Sheehan syndrome

B. Hypothyroidism
C. Prolactinoma

Ans. A

Q331. Diabetic with jaw abscess having greenish pus discharge organism involved?

A- Staph Aureus
B- Pseudomonas
C- Actinomycetes
D- Streptococcus

Ans: B

Q332. Which one is tumour suppressor/DNA repair gene?

A- BCL2
B- BCLX
C- P53
D- KRAS

Ans: C

Q333. A patient has anemia Raised MCV 110 he is also having difficulty in balance peripheral numbness and tingling sensation which type of anemia he is suffering from?

A- Megaloblastic anemia
B- Iron deficiency anemia
C- Thalassemia
D- Anemia of chronic disease
E- Sideroblastic anemia

Ans: A

Explanation:

B12 deficiency cause megaloblastic anemia which is related to Neurological sign of DCML and Balance problem.

Q334. Which one is the best single & very specific test for iron deficiency anemia?

A. Serum ferritin
B. TIBC
C. Plasma iron
D. Transferrin saturation

Ans. A

Q335. Which of the following is the most common premalignant condition the predisposing factor of which is pan chewing?

A- Lichen planus
B- Submucosal fibrosis
C- Leukoplakia
D- Erythroplakia
E- Ulcer

Ans: B

Explanation:

Most Common Pre-malignant lesion – Leukoplakia
Most Lethal Pre-malignant lesion – Erythroplakia
Most Common Pre-malignant Condition – Submucosal Fibrosis
Most Lethal Pre-malignant Condition – Lichen Planus

Q335. Child with rhinorrhea, conjunctivitis fever and koplik spots, what is the causative agent?

A. Adeno virus
B. Picorna virus
C. Paramyxo virus
D. Herpes simplex

Ans. C (Measles)

Q336. Deficiency of bile salt causes following ileal resection causes:

A. Secretory diarrhea
B. Iron deficiency anemia
C. Decreased micelle formation

Ans. C (Osmotic diarrhea)

Q337. Which of the following is an organism that produces fluorescent pigments and is resistant to antibiotics?

A. Staphylococcus
B. Streptococcus
C. Actinomyces
D. Pseudomonas

Ans. D

Q338. Persistent prolonged GERD can predispose to which CA:

A. Adenocarcinoma
B. Squamous cell carcinoma
C. Basal cell CA

Ans. A

Q339. Which of the following contains highest saturation of unsaturated fatty acids?

A. Soup
B. Almond
C. Sunflower seed
D. Soya bean oil

Ans. D

Remember:

Highest quantity of unsaturated fatty acid - sun flower
Highest quality of unsaturated fatty acid - soya bean

Q340. Most common cause of lung abscess/ which organism causes meningitis secondary to pyogenic lung abscess
A. Streptococcus
B. Staphylococcus
C. Pneumococcus
Ans. B

Q341. Regarding staphylococcus aureus:
A. Coagulase positive
B. Coagulase negative
Ans. A

Q342. Kajal cells in gray matter with projections are known as:
A. Protoplasmic astrocytes
B. Histiocytes
C. Ependymal cells
Ans. A

Q343. Serological test will be best diagnosis for:
A. Gonococcus
B. Pneumonia
C. Nocardia
D. Actinomycosis
Ans. A (Q fever > Gonococcus)

Q344 35-year-old developed amenorrhea after third delivery cause:
A. Pituitary adenoma
B. Pituitary necrosis
Ans. B (Sheehan syndrome)

Q345. Recent thrombus shows presence of:
A. Calcium
B. Capillaries
C. Fibroblsts
D. Hemosiderin
E. Lines of zahn
Ans. A

Q346. Platelets aggregation mediated by:
A- Prostacyclin
B- Prostaglandin
C- Thromboxane A2
D- Endothelium
Ans: C

Q347. Standard deviation is a measure which of the following?
A. Variability among individual values
B. Variance
C. Variability
Ans. A

Q348. Patient presented with painful leg ulcer and having Howell jolly bodies on smear what is likely diagnose:
A- Hemolytic anemia
B- Sickle cell anemia
C- Pernicious anemia
D- Hereditary spherocytosis
Ans: B (FA + Robins)

Remember:
Type of mutation: Missense mutation

Q349. Tourist has lateral gaze diplopia, Ataxia, CBC normal, CSF shows 50 – 120 mm pressure, protein 2.1 g/l, glucose 50g/l, 90% lymphocytes diagnose is?
A- Tb meningitis
B- Herpes encephalitis
C- Bacterial meningitis
D- Fungal meningitis
Ans: B

Q350. 27 years old man presents with headache, fever, positive kernigs sign, CSF analysis shows increased lymphocytes, sugar = Normal proteins = 60mg/dl, likely diagnosis:
A- Bacterial meningitis
B- Viral meningitis
C- Tuberculosis meningitis
D- Fungal infection
Ans: B

	Appearance	Opening Pressure mmHg	WBC (cell/µL)	Protein (mg/dl)	Glucose (mg/dL)
Normal	Clear	90-180	< 8	15-45	50-80
Bacterial Meningitis	Turbid	Elevated	>1000-2000	>200	<40
Viral Meningitis	Clear	Normal	<300; Lymphocytic predominance	<200	Normal
Fungal Meningitis	Clear	Normal-elevated	<500	>200	Normal - Low

Q351. 40yrs old male with jaundice liver function tests shows direct bilirubin 10, AlP 1000, ALT 75, GGT 227 what is the most likely diagnosis?
A- Intrahepatic cholestasis
B- Hepatic cholestasis
C- Bile duct obstruction
D- Drug induced jaundice

E- Extra hepatic cholestasis

Ans: E

Q352. Male patient with h/o recent MI family history positive serum cholesterol 400. Which test to do?

a. Apolipoprotein B
b. Apolipoprotein C
c. LDL

Ans. A

Remember:

Best predictor of FUTURE MI or ACS in decreasing order

HsCRP (Highly sensitive CRP) > TC/HDL ratio > Apo-B/Apo-A ratio > LDL > Non-HDL (TC - HDL) > HDL

- ✓ Lipoprotein absent in serum - Chylomicron
- ✓ Lipoprotein with max size - Chylomicron
- ✓ Apoprotein present in chylomicron - Apo B 48
- ✓ Major transporter of cholesterol in blood - LDL
- ✓ Lipoprotein with minimum size - LDL
- ✓ Lipoprotein with scavenging action - HDL
- ✓ Apoprotein in LDL and VLDL - Apo B100
- ✓ Lipoprotein which transports cholesterol from peripheral tissues to liver - HDL

Q. HDL contains which type of apolipoprotein?

A. Apo-A1 and Apo-A ll for HDL
B. Apo B and Apo E for LDL

Ans: ?

Q. HDL decrease by which Apolipoprotein?

A. E
B. B-48
C. B-100

Ans. C

Q353 A 35-year-old man has a history of recurring attacks of pancreatitis, eruptive xanthomas & increased plasma triglyceride levels (2000 Mg/dl.) associated with chylomicrons. Deficiency of which of the following is the likely cause of these symptoms?

A. Apo B-100 receptor
B. Apo B-48
C. HMG-COA reductase
D. LDL receptors
E. Lipoprotein lipase

Ans. E

Q354. 19yr old boy presented to ER in unconscious state, his breath had fruity smell, temp 39, pulse 90, glucose 400, potassium 3.5, urea 10. Diagnosis

A. HONK
B. DKA

Ans. B

Q355. A 12-year-old boy, previously healthy, is admitted to the hospital after 2 days of polyuria, polyphagia, nausea, vomiting and abdominal pain. Vital signs are: Temp 37C, BP 103/63 mmHg, HR 112, RR 30. Physical exam shows a lethargic boy. Labs are notable for WBC 16,000, Glucose 534, K 5.9, pH 7.13, PCO_2 is 20 mmHg, PO_2 is 90 mmHg. What is the diagnosis?

A. DKA
B. HONK
C. Hypothyroidism
D. Iron deficiency

Ans. A

Q356. A 25-year-old woman presents to the clinic for an annual check-up. He is otherwise healthy and has no significant concerns. Basic laboratory studies demonstrate a sodium level of 129 mg/dL and potassium level of 5.9 mg/dL. A physical examination demonstrates hyperpigmentation of the oral mucosa. Review of systems were positive for generalized fatigue, 5-lbs unintentional weight loss, orthostatic hypotension and some headaches. What could be the diagnosis?

A. Cushing's disease
B. Conn's syndrome
C. Addison's disease

Ans. C

Q357. EBV associated with all except:

A. Hodgkin's lymphoma
B. Burkitt's lymphoma
C. Large atypical lymphocyte
D. Nasopharyngeal cancer
E. IM

Ans. A

Q358. Fever with sore throat, cervical lymphadenopathy and EBV infection:

A. Burkitt's lymphoma

B. AML
C. CML
D. IM

Ans. D

Q359. N myc gene related to which of following?

A. Neuroblastoma
B. Burkitt lymphoma
C. Ewing sarcoma
D. Neurofibroma

Ans: A

Explanation:

✓ C myc – Burkitt Lymphoma
✓ N myc – Neuroblastoma

Q. In Burkitt lymphoma, oncogenesis by EBV is via?

A. Proto-oncogene c-myc amplification
B. Proto-oncogene c-myc transcription

Ans. A

Q360. A 50year man presented with Hb 8.2, enlarge spleen. WBC raised. Peripheral smear showing Mature myeloid lineage. What is the genetic defect?

A- 9:22
B- 14:18
C- 11:14
D- 8:14

Ans: A

(Scenario of CML)

Q361. A group of mice was taken and injection of plastic hydrocarbon was given this will work as initiator in process the initiator work as:

A- Slow process will take time
B- Memory produce
C- It is last step in carcinogenesis
D- Cause Clonal proliferation

Ans: B (Robins)

Explanation:

Initiators – All initiating chemical carcinogens are highly reactive electrophiles (have electron-deficient atoms) that can react with nucleophilic (electron-rich) sites in the cell. Their targets are DNA, RNA, and Protein. They cause permanent DNA damage and are **rapid irreversible and has memory**

Promoters – They don't have direct effect on DNA and cause clonal proliferation of already initiated cells. They are **reversible**.

Q362. Angiosarcoma in a plastic factory worker is due to which agent?

A. Hydrocarbon
B. Vinyl chloride
C. Chlorhexidine
D. HOCL

Ans. B

Remember:

Angiosarcoma in Plastic Factory Worker – **Vinyl chloride**
Angiosarcoma in Farmer – **Arsenic**
Plastic Factory Worker – **Liver Angiosarcoma**
Plastic Factory worker + **Smoking** – **Lung CA > Angiosarcoma**

Q363. Carbon tetrachloride, acetaminophen and bromobenzene three well known hepatotoxins form reactive toxic metabolites within the liver cells after they have been metabolized in?

A. Nucleus
B. Nucleolus
C. Golgi apparatus
D. Smooth endoplasmic reticulum
E. Mitochondria

Ans. D

Also know:

✓ Acetaminophen excretion occurs by – Glucorinidation
✓ Antidote of acetaminophen – Acetylcysteine

Q364. Feathery degeneration of hepatocytes on staining due to:

A. Fe accumulation
B. Lead accumulation
C. Cu accumulation
D. Bile salts

Ans. D

Q365. After partial hepatectomy hepatocyte will regenerate due to:

A. Hepatocyte growth factor
B. TGF
C. PDGF

Ans. A

Q366. A patient in mild renal failure develops a persistently mildly elevated serum K+ level, cortisol levels are normal. The hyperkalemia corrects when furosemide is given. The patient's hyperkalemia is most likely related to which of the following?

A. High renin and high aldosterone

B. High renin and low aldosterone
C. Low renin and high aldosterone
D. Low renin and low aldosterone
E. Normal renin and normal aldosterone

Ans. B

Q367. Which of the following thyroid function test shows subclinical hypothyroidism?
A. Normal T3, T4 with increased TSH
B. Low T3, T4 with normal TSH
C. Low T3, T4 with high TSH
D. Low T3, T4 with low TSH

Ans. A

Remember:

Sick euthyroid syndrome = T3 low and t4 and TSH normal
Primary overt hypothyroidism = low T4 and high TSH
Subclinical hypothyroidism = normal T3 and t4 but TSH is High
Central hypothyroidism = Low T4 normal T3 and TSH

Q368. Monitoring thyroxine therapy is by:
A. TSH
B. Aldosterone
C. Renin levels
D. Blood pressure

Ans. A

Q369. First symptoms of hypopituitarism secondary to pituitary tumor is:
A. DI
B. DM
C. Hypogonadism
D. Cachexia

Ans. C

Q370. Which hormones are decreased in Sheehan's syndrome?
A. ACTH
B. TSH
C. Gonadotrophins
D. All

Ans. D

Q371. In an athlete after heavy exercise, what will help to conserve sodium and water?
A. ADH
B. Renin angiotensin aldosterone mechanism
C. ANP

Ans. B

Q372. 19-year-old boy sitting in well ventilated room sweating profusely and hyperventilating HR 120 bp 150/90 cause:
A. Exercise
B. Excitement
C. Mental stress
D. Sympathomimetic drugs

Ans. C

Q373. Which type of necrosis occurs in liver?
A. Coagulative
B. Caseous
C. Liquefactive
D. Fat

Ans. A

Q374. Survival and pathogenicity of mycobacterium is due to? OR Mycobacterium does not produce exotoxin and endotoxin then how it causes inflammation/infection?
A. Cell wall
B. Tuberculin
C. Survive in phagocyte

Ans. A (Mycolic acid is present in the cell wall contributing to pathogenicity)

Q375. Feature of acid fast bacilli in TB?
A. Mycolic acids
B. Cell wall made of peptidoglycan
C. Capsule
D. Periplasmic space

Ans. A

Q376. A woman after in contact with Tb undergoes a PPD test induration of about 3mm is on arm the phenomena is due to:
A- Type 4 hypersensitivity
B- Type 3 hypersensitivity
C- Type 1 hypersensitivity
D- Type 2 hypersensitivity

Ans: A

Explanation:

Skin PPD test that's used for diagnosis of Tb is basically Type 4 HSR caused by Helper T cells & macrophages.

Q377. Which immunoglobin class is produced against TB?
A. IgG
B. IgA
C. IgE

Ans. A

Q378. A person went to Thailand and presented with diarrhea which is watery and large in amount, in stool sample donut shaped cysts were found. Cause is:

A- Cryptosporidium
B- Cystocercosis
C- Ameoba
D- Staph Aureus
E- Histoplasmosis

Ans: A

Explanation:

Diarrhea in AIDS – Cryptospordium
Meningitis in AIDS – Cryptococus

Q379. Eating raw or undercooked meat leads to infestation by?

A. Dracunculous medinesis
B. Echinococcus granulosis
C. Liver fluke
D. Schistosomiasis
E. Tape worm

Ans. E

Q380. The most common characteristic sign and symptoms of food poisoning due to clostridium botulinum is:

A- Diarrhea and vomiting
B- Dysentery
C- Fever
D- Projectile vomiting
E- Flaccid paralysis of respiratory muscles

Ans: E

Q381. Pain mediator in inflammation is:

A. Prostaglandin
B. Bradykinin

Ans. B

Remember:

Most imp mediator of acute inflammation = histamine
Most imp initial mediator of acute inflammation = histamine

Q. Mediator of allergy:

a) 5 hydroxytryptamine
b) Bradykinin
c) IL-1

Ans. A

Remember this regarding inflammation

- ✓ Immediate mediator of inflammation>> histamine
- ✓ Delayed mediator of inflammation>>>leukotrienes & Prostaglandins
- ✓ Fever mediators>>IL-1
- ✓ Chemotaxic to neutrophils >>C5a
- ✓ Important Role of Bradykinin>>> increase vascular permeability
- ✓ Phagocytosis factor>> c3b
- ✓ Chemotactic factor>> LB4
- ✓ Potent chemotactic factor >>> c5a
- ✓ T cell activator >> IL 1
- ✓ Pain Mediator>>> Bradykinin
- ✓ Secreted by endothelium>>prostacyclin
- ✓ Rolling of neutrophils>>> selectins
- ✓ Neutophil adhesions>>> Integrins
- ✓ MMMast cells release>>HistaMMine

Q382. Role of lymphatics:

A. Dissemination of infection
B. Removal of extravascular fluid
C. To present antigen to lymphocytes

Ans. B

Q383. Decrease lymphatic flow due to increase of:

A- Increase Plasma Oncotic Pressure
B- Decrease Plasma Oncotic Pressure
C- Increase Hydrostatic Pressure
D- Increase Permeability

Ans: A

Explanation:

Increase Lymphatic Flow
Increase hydrostatic pressure
Decrease oncotic pressure
Decrease Lymphatic Flow
Decrease hydrostatic pressure
Increase oncotic pressure
Hemorrhage

Q384. The most common cause of metastatic calcification in kidney?

A. Hypervitaminosis D
B. Hyperparathyroidism
C. Excessive calcium intake

Ans. B

Q385. Metastatic calcification most common site?

Blood vessels>kidney

Q. Dystrophic calcification most common site?

Lungs

Q. Most common cause of metastatic calcification:

Hyperparathyroidism

Q386. Most potent antioxidant:

A- Vitamin E
B- Vitamin A
C- Vitamin C
D- Glutathione

Ans: D

Explanation

Potent Antioxidants – Glutathione > Vit. E > C>A

Q387. Pellagra is caused by deficiency of:

A- Thiamine
B- Niacin
C- Vitamin C
D- Vitamin B12
E- Vitamin B6

Ans: B

Q388. A 14th year old boy eats fast food only, peripheral blood picture of macrocyte, diagnosis is:

A- Folic acid deficiency
B- Pernicious anemia
C- Iron deficiency anemia
D- Sideroblastic anemia
E- Thalassemia

Ans: A

Q389. Increased chances of blood clotting/thrombosis can occur due to deficiency of:

A- Factor 8
B- Factor 7
C- Factor 12
D- Anti phospholipid syndrome
E- Factor 8 inhibitor

Ans: C

Explanation:

Factor V mutation (Laden) leads to – **Thrombosis**
Factor V deficiency leads – **Bleeding**
Factor 12 deficiency leads – **Thrombosis**
Most common acquired thrombotic disorder is – **Anti-phospholipid syndrome**
Most common Inherited coagulopathy – **VWBD**
Most common inherited Thrombotic disorder is – **Factor V Mutation (Laden).**

Q390. 18-year-old female with menorrhagia epistaxis and marked decreased platelets count with Giant platelets:

A- ITP
B- Bernard soulier syndrome
C- TTP
D- DIC

Ans: A

Explanation:

ITP – post vaccine + Low platelets count + Giant platelets.
Bernard – Giant platelets + Normal or Slight low platelets count.

Q391. Female pt with thrombocytopenia, reticulocytosis, anemia and neurological signs with raised urea and nitrogen. Broken fragmented red blood cells are seen on peripheral smear. What could be the diagnosis?

A. ITP
B. DIC
C. TTP

Ans. C

Q392. In SLE anemia and thrombocytopenia is due to:

A. Drug induced
B. Antibody mediated
C. Compliment mediated
D. All of the above

Ans. B

Q393. Appropriate function of sternocleidomastoid?

A. Turns neck to the same side against resistance
B. Flexes neck
C. Extends neck
D. Turns neck to the opposite side against resistance

Ans. D

Q394. Voluntary inhibition of micturition reflex is by activation of:

A- Pudendal nerve
B- Detrusor muscle contraction
C- Trigone
D- Sympathetic
E- Parasympathetic

Ans: A

Explanation:

Initiation of Micturition reflex – **Stretch receptors in bladder wall**
Micturition centre (stimulatory) – **Pons**
Micturition centre (Inhibitory) – **Midbrain**
Processing of micturition – **Cerebral cortex**
Micturition reflex / integration – **Sacral segments of spinal cord**
Voluntarily Inhibition – **Activation of Pudendal nerve**

Pain and filling sensations of bladder are carried by – **Sympathetic (Guyton)**

Q395. Vasomotor center, respiratory center, swallowing, coughing and vomiting center:
A. Medulla
B. Pons
C. Midbrain
D. Hypothalamus

Ans. A

Q396. Upper 1/3rd of medulla has:
A. Hypoglossal nucleus
B. Nucleus of tracts solitarus
C. Nucleus Ambigus
D. Dorsal nucleus of Vagus nerve
E. Inferior olivary nucleus

Ans. E

Remember:

GVE of Vagus nerve = Dorsal motor nucleus
Dorsal Medial Nucleus of Thalamus = Related to Memory

Q. Dorsal nucleus of Vagus located in upper or middle medulla?
Posterior portion of upper medulla oblongata✓

Q. Nuclear ambiguous located in:
Upper medulla✓

Medulla Oblongata

Upper Third:

Upper Third of Medulla is known as Olivary Part because most prominent structure in upper third if Medulla is *Inferior Olivary Nucleus*. So mark Inferior Olivary Nucleus > Nucleus Ambiguus > Vestibulocochlear Nucleus > Dorsal Accessory Olivary Nucleus
Most Important structure is Inferior Olivary Nucleus
Anterior Portion → Pyramids, Inferior Olivary Nucleus and Arcuate Nucleus
Middle Portion → Medial Longitudinal Fasciculus, Medial Lemniscus, Nucleus Ambiguus and Dorsal Accessory Olivary Nucleus
Posterior Portion → Vestibulocochlear Nucleus, Hypoglossal Nucleus and Dorsal Vagus Nucleus

Middle Third:

Also known as *Medial Lemniscus Decussation* part.
Nucleus Gracilis and Cuneatus
Spinal Nucleus of Trigeminal Nerve
Internal Arcuate Fibers
Hypoglossal Nucleus
Accessory Nerve Nucleus.

Lower Third:

Also known as *Pyramidal Decussation* part.
Nucleus Gracilis
Nucleus Cuneatus
Spinal Nucleus of Trigeminal Nerve
Medial Accessory Olivary Nucleus

Q397. Which of the following forms posterior superior boundary of 4th ventricle?
A. Pons
B. Medulla
C. Superior Cerebellar peduncle
D. Superior medullary vellum
E. Both C and D

Ans. E

Q398. Purkinje cells of the cerebellar cortex are excited by:
A. Stellate cells
B. Basket cells
C. Granule cells
D. Golgi cells

Ans. C

Q. Purkinje cells are typically present in: Cerebellar cortex

Q399. In purkinji fibers fast conduction is due to:
A- Increased sodium ion concentration
B- Less gap junctions
C- More intercalated discs
D- Largest diameter

Ans: D

Q400. A young man presented with absent stretch reflex, atrophy of calf muscles, loss of pain and temperature on the lateral aspect of leg and foot. The most likely lesion is:
A- Upper motor neuron lesion
B- Lower motor neuron lesion with anterior horn damage
C- Lower motor neuron lesion
D- Lower + upper motor nueron lesion

Ans: B

Q401. Structure with simple cuboidal epithelium and lymphoid tissue?
A. Palatine tonsil
B. Tubal tonsil
C. Payer's patches

Ans. C

Q402. Histology shows tubular structure with pseudostratified epithelium and thick muscle wall. Most likely structure is?

A. Vas deferens
B. Ductus deferens
C. Prostate

Ans. A

Q403. A histological section of a gland shows many acini lined with pseudostratified columnar epithelium embedded in stroma, with smooth muscle in it. Which gland is dis?

A- Prostate gland
B- Parotid gland
C- Submandibular gland
D- Seminal vesicle
E- Lacrimal gland

Ans: A

Q404. With respect to inactive follicles, active thyroid follicles:

A. Have abundant colloid
B. Are large
C. Have columnar cells
D. Both A & B

Ans. C

Remember:

Inactive thyroid = Cuboidal cells
Active thyroid follicles = Columnar cells
This concept has been repeated multiple times in different ways

Q405. RET gene mutation Associated with:

A. Follicular Carcinoma
B. Medullary Carcinoma
C. Undifferentiated neoplastic Carcinoma
D. Grave's disease

Ans. B

Remember:

Mutation in RET gene = Medullary
Mutation in RAS or P13/AKT Pathway = Follicular

Q406. A thyroid mass usually moves with swallowing because the thyroid gland is enclosed by which of the following fascia?

A) Carotid sheath
B) Investing layer of the deep cervical fascia
C) Pretracheal fascia
D) Prevertebral fascia

Ans. C

Q407. Pt. having lobar pneumonia, how to diagnose it?

A. Sputum culture
B. AFB
C. Blood culture
D. Stain for sputum

Ans. A

Q408. Criteria for diagnosis of sepsis:

A. HR is greater than 100
B. HR is greater than 120
C. Positive culture
D. WBC 15000

Ans. C

Q409. In IV drug abuser what's the causative organism for infective endocarditis?

A. S. aureus
B. S. viridans
C. S. pneumonia
D. S. bovis

Ans. A

Remember:

- ✓ Abuser = aureus
- ✓ Most common = viridans
- ✓ Sub-acute = viridans
- ✓ Acute = aureus
- ✓ Post valve replacement within 60 days = epidermidis

Q. In IV drug abuser most common cause of osteomyelitis = Pseudomonas.aeruginosa

Remember:

- ✓ Pseudomonas in IV drug abusers and diabetics.
- ✓ Staph Aureus in general population.
- ✓ Salmonella- sickle cell patients
- ✓ Mycoplasma tuber- in vertebra (pott disease)

Q410. Patient diagnosed with staph aureus infection with skin involvement and high grade fever/sepsis treatment with:

A. Amoxcillin
B. Carbencillin
C. Cloxacillin
D. Penicillin G
E. Pencillin V

Ans. C

Q411. Non bacterial endocarditis is seen in:

A. Neoplasms
B. SLE
C. Rheumatoid arthritis
D. IHD

Ans. A

Remember:

Flat small to medium vegetation – Libman Sac endocarditis

Friable small vegetation – NBTE

Friable large irregular vegetation – IE

Q412. Inactivated toxin used as toxoid vaccine in:

A. Measles
B. Tetanus
C. Mumps
D. Rubella

Ans. B

Q413. Anemia of chronic renal failure responds to treatment with:

A. Natural erythropoietin
B. Improves rapidly after successful renal transplant
C. Treated with iron supplementation

Ans. A

Q414. Right kidney is differentiated from left kidney by?

A. Colour of kidney
B. No. of coverings of kidney
C. Relations of structures in the Hilum
D. Surfaces & poles of kidney
E. Weight & size of kidney

Ans. C

Q415. Consultant surgeon doesn't allow young trainee to operate on the right adrenal gland due to fear of damage to which of the following structure?

A. Aorta
B. Thyroid
C. SVC
D. IVC

Ans. D

Q416. Highest oxygen saturation in fetal circulation is seen in:

A- Umbilical artery
B- Umbilical vein
C- Aorta
D- IVC
E- SVC

Ans: B

Q417. Umbilical vein has % of oxygen:

A- 20%
B- 30%
C- 40%
D- 60%
E- 80%

Ans: E

Q418. Which of the following is LEAST likely found in fetal hemoglobin?

A. Delta chains
B. Beta chains

Ans. B

Q419. In fetal hemoglobin beta chain replaced by which chain?

Ans: Gamma chain

Q. Most common Hemoglobin in normal adult is:

A. HbA
B. HbF
C. HbA2

Ans. A

- ✓ Normal adult hemoglobin contains **95% to 98% hemoglobin A (two alpha chains and two beta chains)**. It also contains 2% to 3% Hb A2 (normal variant with two alpha chains and two delta chains) and 1% to 2% fetal hemoglobin consisting of two alpha and two gamma chains.
- ✓ **HbA** Consist of – Two alpha and two beta subunits **($\alpha 2\beta 2$)**
- ✓ **HbF** consist of – Two alpha and two gamma subunits **($\alpha_2 \gamma 2$)**
- ✓ **HbA2** consist of – Two alpha and two delta subunits **($\alpha_2\delta_2$)**

Q420. Droplet infection can spread up to:

A- 1-2 feet
B- 3-6 feet
C- 8-9 feet
D- 15 feet
E- Less than 1 feet

Ans: A

Explanation:

Droplet – 1-3 f

Air born – 3-6 f

Q421. B cell markers used for their identification in a tumour:

A- CD 21
B- CD 23
C- CD 19 20
D- CD 15

Ans: C

Q422. A baby went through exchange transfusion due to ABO disease of newborn. 10 days later he developed erythema on palms, raised bilirubin

and AST and also diarrhea. What is the likely cause?

A. Delayed hemolytic reaction
B. Graft Vs host disease
C. CMV
D. Hepatitis
E. Acute transfusion reaction

Ans. B

Q423. A Patient presented with Cough, coryza, conjunctivitis and koplik spots. Most like organisnm responsible for this clinical presentation is which among these?

A- Paramyxo Virus
B- Picarna
C- Polyoma virus
D- Orthomyovirus
E- Adeno

Ans: A (Measles)

Explanation:

Paramyxo Viruses

Measles
Parainfluenza
Mumpss
RSV

Orthomyxo Virus

Influenza Virus

Q424. Which hormone is mainly raised in stress of surgery?

A- Catecholamines
B- Cortisol
C- Thyroxine
D- Insulin
E- GH

Ans: B (Guyton)

Explanation:

Stress hormone – Cortisol >ACTH
Stress + Vasoconstriction – Epinephrine
Stress Early changes events as – CRF (Hypothalamus) > ACTH (Pituitary) > Cortisol (Adrenal).

Q425. Following occurs in cushing syndrome:

A. Lymphocytosis
B. Neutropenia
C. Eosinopenia
D. Leukocytosis

Ans. C

Q426. Patient with cushing syndrome which of the following is needed for the production for the hormone in excess?

A. Chenocolic acid
B. Progesterone
C. Estrogen
D. Aldosterone

Ans. B

Q427. How is blood pressure maintained below 60mmHg?

A- Cortisol
B- CNS ischemic
C- Insulin and glucagon
D- Sympatho adrenergic system

Ans: B

Explanation:

Baroreceptor respond maximally to – Increasing BP (Ganong).
Most rapid response to decrease BP – Baroreceptor.
Most potent response to decrease BP – CNS Ischemic.
CNS ischemic activate at – 60 or below 60mmHg (Guyton).
Maintain During Shock – Baroreceptor
Maintain as a whole – RAAS
Short Term BP control – Baroreceptor
Long Term BP control – RAAS

Q428. Vertebral bodies limited by which of following?

A- Anterior and posterior longitudinal ligament
B- Ligament flavum
C- Transverse ligament
D- Interspinous ligament

Ans: A

Explanation:

Vertebral Bodies Limited by – Anterior and posterior Longitudinal Ligament
Vertebral Bodies kept in position by –Anterior and posterior Longitudinal Ligament
Vertebrae joined to Adjacent Lamina – Ligament Flavum

Q429. Most common site of lytic lesions in multiple myeloma:

A. Vertebra
B. Skull
C. Pelvis
D. Ribs

Ans. A

Don't confuse with this:

Q. The most commons primary bone tumor is:
A. Osteosarcoma
B. Metastatic carcinoma
C. Ewing sarcoma
D. Multiple myeloma

Ans. B

Q430. During thyroid surgery posterior part of thyroid gland is spared to save:
A. Parathyroid gland
B. RLN
C. Thymus
D. Aorta

Ans. A

Q431. Sesamoid cartilage is present in:
A- Larynx
B- Epiglottis
C- Ala of nose
D- Between intervertebral discs
E- Symphysis pubis

Ans: C > A

Explanation:

Hyaline cartilage – Larynx + articular surfaces of Synovial joints + Trachea
Elastic cartilage – Ear pinna
Sesamoid cartilage – Ala of nose > Larynx
Largest sesamoid bone in body is – **Patella**

Q432. Which part of respiratory system lacks mucous glands?
A. Trachea
B. Nasopharynx
C. Terminal bronchiole

Ans. C

Q433. Pleasure, Fear, Addiction are experienced in? OR Reward center is in? (both were recalled by candidates)
A. Nucleus accumbens and septal nucleus
B. Locus ceruleus
C. Basal nucleus of Meynet
D. Raphe Nucleus

Ans. A

Also know:

Q. Stress and panic is sensed in:
A- Nucleus accumbens & septal nucleus
B- Locus ceruleus
C- Basal Nucleus of Mynet
D- Raphe Nucleus

Ans. B

Remember:

- ✓ Nucleus accumbens – GABA
- ✓ Locus Ceruleus – Nor-Epinephrine
- ✓ Ventral tegmentum – Dopamine
- ✓ **Reward** center: In **lateral** and **ventromedial** nuclei of hypothalamus
- ✓ **Punishment** center**: Medial** hypothalamus Periventricular zone of hypothalamus and thalamaus + central gray area around aqueduct of sylvius

Q434. A patient having Tachycardia abdominal distension and hypotension after laparotomy due to which of these?
A- Hypovolemic Shock
B- Septic Shock
C- Cardiogenic Shock
D- Anaphylactic Shock
E- Neurogenic Shock

Ans: A

Q435. Mainstay of prevention of nosocomial infection:
A- Wear gloves
B- Use extensive hand washing after examining every patient
C- Sterilize used instruments
D- Wear mask

Ans: B

Q436. A patient is in ICU on ventilator, he developed chest problem on investigations he was diagnosed to have pneumonia which of the following organism most probably is responsible?
A. Legionella
B. Staph aureus
C. Streptococcus
D. Pseudomonas aeruginosa

Ans. D

Remember:

- ✓ Ventilator associated pneumonia – pseudomonas
- ✓ Air conditioning – Legionella
- ✓ Alcoholics – Klebsiella
- ✓ Cystic fibrosis – pseudomonas
- ✓ Atypical pneumonia – Mycoplasma

Q437. A female having curdy white vaginal discharge, vaginal swab sample shows pseudohyphae. What organism is it?
A. Gonnorhera
B. Syphlis
C. Candida albicans

D. Chlamydia

Ans. C

Different types of vaginal discharge:

- ✓ Curdy white vulvovaginal pruritus is candida. There may b history of diabetes immunocompromised patient, pregnancy, broad spectrum antibiotics.
- ✓ Yellowish or pinkish vaginal discharge trichomonas.
- ✓ Thin discharge, fishy amine odor, malodorous especially when 20% potassium hydroxide added. Clue cell on pap smear. Is due to bacterial vaginosis (gardnerela)

Common vaginal infections:

	Bacterial Vaginosis	Trichomonas Vaginitis	Candida Vulvovaginitis
Signs and Symptoms	No inflammation Thin, white discharge with fishy odor	Inflammation ("strawberry cervix") Frothy, yellow-green, foul-smelling discharge	Inflammation Thick, white, "cottage cheese" discharge
Lab Findings	Clue cells PH > 4.5	Motile trichomonads PH > 4.5	Pseudohyphae pH normal (4.0-4.5)
Treatment	Metronidazole	Metronidazole Treat sexual partner(s)	-zoles

Q438. Female patient on HRT having risk of which of following?

A- Ovarian CA
B- Endometrial Ca
C- Breast CA
D- Headache
E- Thromboembolism

Ans: E

Explanation:

- ✓ Low estrogen OCP cause – Hepatic adenoma
- ✓ High estrogen OCP prolong/long term use cause in post-menopausal – ENDOMETRIAL CA
- ✓ Estrogen containing ocp increase risk of – Thromboembolism (DVT)
- ✓ HRT increase risk of –DVT (Thromboembolism)
- ✓ Mixes HRT containing both estrogen and progesterone cause – Breast CA (Robins)

Q439. Regarding beta thalassemia what is true?

A. Mutation in promoter region of Beta gene
B. Point mutation

Ans. B

Remember:

Alpha thalasemia = Deletion on chromosome 16
Beta thalasemia = Point mutation on chromosome 11
Sickle cell = missense mutation

Q440. Regarding typhoid fever:

A. Asymptomatic
B. Asymptomatic carrier should be isolated and treated
C. All patients become carrier
D. Rose spots on 7th day

Ans. B > D

Also know:

Q. The carrier state of Typhoid Fever is due to?

A. Persistent Bacteraemia
B. Persistent Duodenal Lesions
C. Persistent Intestinal Ulcers
D. Typhoid Cholecystitis
E. Persistent Rose Spots

Ans. D

Q. Which disease involves a carrier stage?

A. Measles
B. Mumps
C. Polio
D. Typhoid

Ans. D

Q441. A patient blood is agglutinates with anti-sera A and D and contain agglutinin B, the blood group of the patient is:

A- A^+
B- B^+
C- O^+
D- AB^+
E- O negative

Ans: A

Q442. Most common complication of rubella in 8th week pregnant lady:

A- Cataract
B- Deafness
C- PDA
D- Microcephaly

Ans: B

Explanation:

Rubella in pregnancy complication overall – Deafness > Cataract
Rubella in pregnancy complication within 7 weeks – Cataract
Rubella in pregnancy complication After 7 weeks – Deafness

Q443. Medullary rays present in:
A. Renal cortex
B. Renal medulla

Ans. A

Explanation:

- ✓ The medullary rays are well-defined anatomic structures consisting of bundles of renal tubules which form in the **renal cortex** and continue through the renal medulla as the medullary striations.
- ✓ Medullary rays contain – **Collecting ducts**

Q444. Which structure of kidney is affected most by ischemia?
A. PCT
B. DCT
C. Loop of henle

Ans. A

Also know:

Q. Patient has history of HTN, his BP was 210/ 160 and was taking anti-hypertensives. What structure in the kidney is affected most?
A. Macula densa
B. PCT
C. Collecting tubules
D. Glomerulus

Ans. A

Answer should be JG apparatus or JG cells. But here Macula densa being part of JG apparatus is correct.

Q445. Which fluid that is given in primary dehydration decreases ICF and increases ECF and total body water?
A. 3% normal saline.
B. 0.9% normal saline.

Ans. A

Q446. Cause of edema in burn patient is due to deficiency of:
A- Collagen
B- Albumin
C- Gamma globulin
D- Water
E- Dystrophin

Ans: B

Q447. A 28-year-old man with bronchiectasis presents to the hospital emergency room with 3 days of increasing cough, sputum, and dyspnea despite maximizing his bronchodilators. About 1 month ago, an outpatient stable room arterial blood gas showed pH 7.38, PaO2 55 mmHg, PaCO2 65 mmHg, and HCO3- 32 mEq/L. His current vital signs are BP 117/65 mmHg, P 123/min, T 100°F. His room air ABG in the ER is pH 7.28, PaCO2 70 mmHg, PaO2 50 mmHg, and HCO3- 23 mEq/L. Which of the following best characterizes the current acid-base status?
A. Compensated metabolic acidosis
B. Compensated metabolic alkalosis
C. Uncompensated metabolic acidosis
D. Uncompensated respiratory acidosis

Ans. D

Q448. A person was admitted to hospital in a coma. Analysis of the arterial blood gave the following values: PCO2 16 mm Hg, HCO3- 5 mmol/l and pH 7.1. What is the underlying acid-base disorder?
A. Metabolic acidosis
B. Respiratory alkalosis
C. Metabolic alkalosis
D. Respiratory acidosis

Ans. A

Q449. Characteristic feature of mesothelioma
A. Pleural plaques
B. Pleural effusion

Ans. A (Asbestosis)

Q450. Anterior interventricular artery (Left anterior descending artery) is accompanied by which of following?
A- Middle cardiac vein
B- Anterior cardiac vein
C- Posterior cardiac vein
D- Great cardiac vein
E- Marginal artery

Ans: D

Explanation:

Great Cardiac vein accompany – Left ant. Descending Artery
Middle Cardiac vein accompany – Post. Interventricular artery

Small Cardiac vein accompany – Marginal artery

Q451. Sentinel lymph node biopsy is indicated in which of the following carcinomas?

A. Bilateral disease
B. Nodes negative
C. Node positive

Ans. A

Q. Sentinel biopsy of axillary lymph node in a suspected breast cancer case is done to:

A. Avoid the axillary dissection
B. Confirm the ultimate prognosis of disease
C. To avoid metastasis

Ans. A

Q452. Patient came in ER with acute chest pain ECG done what finding will suggest acute MI?

A- T wave peak
B- U wave
C- ST displacement
D- Tall QRS

Ans: C

Q453. Assessment of muscle injury by:

A. Myoglobin
B. CKMB
C. CKBB
D. CKMM
E. Muscle biopsy

Ans. A

Explanation:

CK MM gives value for only skeletal muscles
CK MB for cardiac muscles.

Q454. Radiation mostly causes cell injury by causing damage of?

A. Mitochondria
B. Endothelium
C. Cell membrane
D. Nucleus

Ans. D

Also know:

Q. Radiation effect causes injury to:

A. Cell membrane
B. Nucleus
C. Dna
D. Cytoplasm
E. Mitochondria

Ans. C > B

Q455. Grading of a tumor shows:

A- Extent of spread
B- Degree of differentiation
C- Increased N/C ratio
D- Pleomorphism

Ans: B

Explanation:

Grading – Nuclear differentiation / degree of differentiation / Mitosis
Staging – Extent of spread / Lymph nodes involvement

Q456. Most important microscopic feature for malignant tumor:

A. High n/ c ratio
B. Pleomorphism
C. Invasion of basement membrane

Ans. C

Also know:

Q. The most important microscopic diagnostic criteria for the premalignant lesion?

a) Enlargement of cells
b) High N:C ratio
c) Mitotic figures
d) Pleomorphism
e) Presence of nucleolus

Ans. D

Q. The diagnostic differential feature between hyperplasia and a benign tumor is?

a) Increase in the number of cells
b) Increase in the size of cells
c) Number of mitotic figures
d) Presence of a capsule
e) Resemblance ro a parent tissue

Ans. D

Q457. Material exchange between cells prevented by:

A. Tight junction
B. Gap junction

Ans. A

Q458. Speed of action potential in large nerve fiber:

A. 300msec
B. 30msec
C. 3msec

Ans. B

Q459. Nerve stimulation is more difficult to create action potential?

A. Hyponatremia
B. Hypernatremia
C. Hyperkalemia

D. Hypokalemia

Ans. D

According to recalls an MCQ about NMJ was asked, but exact MCQ was not listed. I have included as many variations of MCQs related to it as I could.

Q460. Neuromuscular junction of cardiac muscles supplied by sympathetic and parasympathetic nerves are:

A. Preganglion
B. Postganlionic
C. Mylinated
D. Interrupted by desmosomes

Ans. B

Q. End plate fiber of neuromuscular junction contains:

A. Acetylcholinesterase
B. Pre synaptic ach vesicle
C. Post synaptic ca vesicle
D. Synthesize acetyl choline

Ans. A

Q. Drug cause blockage at neuromuscular junction?

A. Curare
B. Botulism

Ans. A

Explanation:

- ✓ Curare because
- ✓ Botulinus blocks release of ach from presynaptic terminal

Q461. Second degree heart block will most likely result in:

A. Atrial rate more than ventricular rate
B. Atrial contraction more than ventricular contraction.

Ans. A

Q462. Stony dull percussion note shows:

A. Fluid in pleural cavity
B. Pneumonia
C. Atelectasis
D. Spontaneous rupture of bulla

Ans. A

Q463. Phrenic nerve near it's origin passes anterior to which muscle?

A. Scalene anterior
B. S. Posterior
C. S. Medius
D. Sternocleidomastoid

Ans. A

Q464. 7 year old child presents with a lesion in upper tibia. X-ray shows radiolucent area with Codman's triangle and Sunray appearance. Diagnosis is:

A. Ewing's sarcoma
B. Osteosarcoma
C. Osteoid osteoma
D. Chondrosarcoma

Ans. B

Q465. Most mature bone is present in which part?

A. Central Haversian canal
B. Peripheral cortex

Ans. A

Q466. The marker of prognosis in acute and chronic liver disease is:

A. APTT
B. PT
C. BT
D. LFT

Ans. B

Q467. In liver cell injury enzyme decrease is:

A. ALP
B. 5-nucleotidase
C. AST
D. GGT
E. ALT

Ans. B

But remember; prefer pseudocholinestrase > 5-nucleotidase

Q468. Which of them increase in hepatocyte damage?

A. SGPT
B. SGOT
C. GGT

Ans. A

Remember: SGPT is also called alanine amino transferase (ALT)

Q469. Patient with anti HCV+, LFTs normal, what to do next?

A. Repeat anti HCV
B. PCR
C. Repeat lfts
D. Regular follow up

Ans. A

Q. Patient with anti HCV+, LFTs raised what to do next?

A. Repeat anti HCV
B. PCR
C. Repeat LFTs

D. Regular follow up

Ans. B

Q470. Best method to screen for HCV:

A. Anti HCV antibodies
B. HCV antigen
C. PCR
D. NAAT

Ans. A

Q471. Amoebic liver abscess spread to lungs by:

A. Direct
B. Lymphatic
C. Hematogenous
D. Through diagram

Ans. A

Remember: Amoebic abscess of lungs occur due to direct ascent of underlying liver abscess.

Q472. The commonest hospital acquired organism for UTIs:

A- Pseudomonas Aeruginosa
B- Staphylococcus Aureus
C- Citrobacter Species
D- Escherichia Coli
E- Klebsiella Specie

Ans. D

Remember:

UTI: Ecoli > Proteus

Hospital acquired UTI: Ecoli > Klebsiella > Proteus

Q473. A mother delivered a child and brought her 5 days baby with fever, vomiting and neck stiffness, what is the cause?

A- Group A streptococcus
B- Group B streptococcus
C- Nisseria
D- E. coli
E- H. influenza

Ans: B (FA)

Q474. The most potent stimulus for gallbladder contraction is:

A- CCK
B- Gastrin
C- VIP
D- Trypsin
E- Substance P

Ans: A

Q475. A 2-day-old neonate is noted in the well-baby nursery to have some abdominal distention. He had one episode of bilious vomiting. He is feeding well and does not seem altered. However, his mom is concerned that he has not passed any stool yet. Abdominal radiography shows distended loops of bowel. A barium enema shows a dilated colon with a funnel-shaped transition zone. Pediatric surgery is consulted for biopsy and it was seen that there were absent ganglion cells in rectoanal region. What could possibly be the diagnosis?

A. Meckel's diverticulum
B. Achlasia
C. Esophageal atresia
D. Hirshsprung's disease

Ans. D

Q476. Highest blood flow in which zone of liver?

A. Zone 1
B. Zone 2
C. Zone 3

Ans. A

Remember:

- ✓ **Zone 1** highest blood flow, best oxygenated, affected first by viral hepatitis.
- ✓ **Zone 3**. Affected 1st by ischemia, most sensitive to metabolic toxins, Site of Alcoholic hepatitis.

Q477. Brachiocephalic vein is formed by:

A. Internal jugular and subclavian
B. External jugular and subclavian
C. Maxillary vein and retromandibular vein
D. Axillary vein and cephalic vein

Ans. A

Remember mnemonic ISB (Islamabad) = **I**nternal jugular + **S**ubclavian = **B**rachiocephalic

Q478. Valves are present in:

A. Arteries
B. Large veins
C. Medium size vein
D. Capillaries

Ans. C

Q479. Which heart sound is produced due vibration of the ventricles during rapid inflow?

A. 3rd heart sound
B. 4th heart sound
C. 1st heart sound
D. 2nd heart sound

Ans. A

Q480. Motor apraxia is caused by lesion in:

A. Premotor area
B. Parietal lobe

Ans. A

Q. Person has severe problem in performing motor planning. Motor apraxia d/t lesion of:

A. Precentral gyrus
B. Temporal lobe
C. Prefrontal gyrus
D. Parietal lobe

Ans. D

Motor Apraxia:

Motor Apraxia is difficulty in planning a motor activity due to

1) Area 5 and 7 (Posterior parietal Lobe) lesion which normally gives sensory input to premotor area for motor planning.

2) Direct lesion to premotor area (Area 6 in frontal lobe)

Out of these two Parietal lobe lesion is more common than premotor lesion.

Additional Info:

Precentral Gyrus is primary motor area

(Area 4) Lesion of which will cause Motor deficit.

Prefrontal Cortex (area in front of premotor cortex)

Lesion of which will cause lack of judgement, emotional disturbance and social apathy AKA frontal lobe syndrome.

Q481. Patient having HIV sero positive and not yet developed AIDS, suffer acute suppurative otitis media the likely organism responsible for it:

A- Pseudomonas areginosa
B- Candida albican
C- Mycobacterium avium
D- Staphylococcus aures
E- Streptococcus pneumonia

Ans: E

Q482. A patient having bleeding tendency and diagnosed as VWD. Which among the following test is used for diagnosis of VWB disease?

A- Increase PT
B- Increase BT
C- Decrease APTT
D- Increase FDP
E- Decrease PT

Ans: B

Explanation:

Haemophilia: Raised APTT
ITP: Raised BT
VWD: Raised BT and APTT
DIC: Raised PT, APTT, BT &FDP

Q483. A patient of VWD present with bleeding what is the most appropriate treatment of VWD if no factor 8 is available?

A- FFP
B- Cryoprecipitate
C- Factor 9
D- Vitamin k
E- Vitamin C

Ans: B

Explanation:

Cryoprecipitate has – Factor 8+13
FFP has – Factor 9

Q484. Which one mediates WBC attachment to bacteria?

A- Opsonin
B- ICAM
C- LAF
D- IL6
E- LFA 1

Ans: A

Explanation:

WBC attach to Endothelium – ICAM
WBC attach to bacteria – Opsonin

Opsonin: Fc portion of IgG n c3b

Q485. The following is true about acute inflammation?

A. Local response to injury
B. Systemic response to injury

Ans. A

Q486. There is a bomb blast in the area which containing Strontium 90 what will be the complication?

A. Ewing sarcoma
B. Leukemia
C. Giant cell carcinoma
D. Osteosarcoma

Ans. D>B

Remember:

If just bomb blast/nuclear blast without mention of strontium 90 = leukemia
If just strontium 90 mentioned = osteosarcoma

Q487. Sperms become partially motile in the:

A- Sertoli cells

B- Seminiferous tubules
C- Rete testis
D- Epidydmis
Ans: D

Q488. A girl with delayed wound healing weight loss, increase appetite, fasting glucose 180 random 250 Next investigations is:
A- Ketone bodies
B- Albumin
C- HbA1c
D- Thyroid hormone levels
Ans: C

Q489. A Patient after Gastric content in supine position aspiration will lodge in which of following lobe?
A- Right lower lobe
B- Right upper lobe
C- Right posterior lobe
D- Left Posterior lobe
E- Left Upper lobe
Ans: A (FA + Grey'anatomy)

Explanation:
Foreign body in **supine** – Apical (Superior) segment of right lower lobe.
Foreign body in **sitting/standing (Upright)** – Posterior basal segment of right lower lobe.
Foreign body in **right lateral** – Posterior segment of right upper lobe.
Foreign body in **left lateral** – Inferior lingular of left upper lobe

Q490. Absorption of fat-soluble vitamins requires:
A. Intrinsic factor
B. Chymotrypsin
C. Pancreatic lipase
D. Pancreatic amylase
E. Secretin
Ans. C

Remember:
Fat soluble vitamins are: ADEK
Which vitamins toxicity is common = Fat soluble

Q491. Most important function of progesterone?
A- Breast alveolar development
B- Decrease uterine contraction in pregnancy
C- Endometrium proliferation
D- Fat deposition
Ans: A

Explanation:
Estrogen Function – Breast Duct Development + Endometrial Proliferation
Progesterone Function – Maintain Endometrial Thickness (Proliferation) > Secretory phase > Alveoli and lobule development.

Q492. Which of the following is an estrogen secreting tumour?
A. Androblastoma
B. Granulosa and theca cell tumor
C. Choriocarcinoma
D. Dysgerminoma
Ans. B

Q493. Secondary oocyte is surrounded by corona radiata, which of the following layer contributes to formation of corona radiata?
A. Granulosa cells
B. Interstitial cells of ovary
C. Theca Externa cells
D. Theca Interna cells
Ans. A

Q494. Rh negative mother delivered a baby at 34 weeks with anemia pallor. Baby died 6 hours after transfusion. Autopsy findings?
A- Basal ganglia staining
B- Cardiac malformations
C- Hydrops fetalis
D- Renal cyst
Ans: A

Q495. Liver maintains serum glucose levels between meals by:
A. Glycogenesis
B. Gluconeogenesis
C. Glycogenolysis
Ans. C

Q496. Chi square chart used for which of following?
A- Statistical analysis
B- Categorical data
C- Numerical analysis
D- Analytical analysis
Ans: B

Explanation:
T Test – Mean of 2 groups
Anova Test – Mean of 3 or more groups
Chi Square – 2 by 2 Table and Categorical Data
Pie Chart – Related to Percentages

Q497. Irridiation before blood transfusion is done to:
A. Prevent GVHD
B. Prevent hemochromatosis
C. Prevent hypocalcemia
Ans. A

Q498. Mitral area location:
Actual location: Behind the left half of the sternum opposite the left 4th costal cartilage
Area of auscultation: Left 5th intercostal 9cm from the mid line over apex beat.

Q499. Normal mitral valve area is:
4-6cm^2

Q500. With exception of sweat glands, parasympathetic system causes what?
A- Dec. secretions
B- Promote secretions
C- Increase HR
D- Decrease peristalsis
Ans: B

Q501. Sympathetic effect on vessesl mediated by which neurotransmitter:
A. Acetylcholine
B. GABA
C. Glycine
D. Norepinephrine
Ans. D

Q502. Which of the following is the outermost thickest layer of the epidermis made up of 10 to 30 thin layers of continually shedding dead keratinocytes?
A. Stratum basale
B. Stratum corneum
C. Stratum granulosum
D. Stratum spinosum
Ans. B

Q503. Transplantation of kidney from mother to son is:
A. Autograft
B. Allograft
C. Isograft
D. Xenograft
Ans. B

Remember:
Allograft – Same species
Xenograft – Different species
Autograft – From own body
Isograft – Between twins

Q504. In Familial hypercholesterolemia the defect is in a gene coding for which receptor:
A. HDL receptor
B. VLDL receptor
C. LDL receptor
D. IDL receptor
Ans. C (Also know: Familial hypercholesterolemia is autosomal dominant)

Q505. Gaucher's disease occurs due to the enzymatic deficiency of:
A. Sphingomyelinase
B. Hexosaminadase A
C. Alpha glucocerebrosidase
D. Galactosidase A
Ans. C

Remember:
- ✓ Gaucher's disease is the most common lysosomal storage disease
- ✓ Criggler-Najjar - UDP-glucuronyl transferase
- ✓ Von-Gierke's - Glucose -6- phosphatase
- ✓ Pompe's - Acid maltase (Acid α glucosidase)
- ✓ Mc Ardle's - Muscle glycogen phosphorylase
- ✓ Tarui's disease - Muscle phosphorylase
- ✓ Niemann-Pick's – Sphingomyelinase
- ✓ Gaucher's - Gucocerebrosidase
- ✓ Tay-Sach's - Hexosaminidase-A
- ✓ Phenylketonuria - Phenylalanine hydroxylase
- ✓ Alkaptonuria - Homogentisate oxidase
- ✓ Albinism - Tyrosinase
- ✓ Fabry's - α-galactosidase
- ✓ Lesch-Nyhan syndrome - HGPRT
- ✓ Sandhoff - Hexosaminidase-β
- ✓ Xeroderma pigmentosum - DNA exinuclease
- ✓ Sudden infant death syndrome - Medium chain acyl CoA dehydrogenase
- ✓ Maple syrup urine - Branched chain α-ketoacid dehydrogenase
- ✓ Acute Intermittent Porphyria- Uroporphyrinogen-1 synthase
- ✓ Maple syrup urine disease - Alpha ketoacid decarboxylase
- ✓ Hereditary fructose intolerance Aldolase b
- ✓ Fructosuria - Fructokinase b
- ✓ Galctosemia - Galactose-1-phosphate uridyl transferase

Q506. Which of following is Spore forming bacteria?
A- Clostridium Tetani

B- Psudomonas
C- Staph Aureus
D- Streptococcus
E- Proteus
Ans: A

Q507. Definitive diagnosis of lobar pneumonia is by which of following?
A- Throat culture
B- Urine culture
C- Sputum culture
D- Gram staining
E- X-ray
Ans: C

Q508. Cytokeratin is an intermediate filament found in cells but is most commonly used for detection of:
A- Neoplasia
B- Degree of metaplasia or dysplasia
C- To check rate of proliferation
D- For staging of disease
Ans: A

Remember:
Cytokeratin – Carcinoma (Epithelial)
Vimentin – Sarcoma (Mesenchymal)
Desmin – Muscle

Q509. Important adverse effects of protamine:
A. Hypotension
B. Bleeding
Ans. A

Remember:
At therapeutic dose: Hypotension
At toxic dose: Bleeding

Q510. Manubrio sternal joint type is:
A- Primary cartilaginous
B- Secondary cartilaginous
C- Symphysis
D- Syndesmosis
E- Ball and socket
Ans: B

Explanation:
Primary cartilaginous joint
1st Sternocostal joint
Between epiphysis and Diaphysis of long bone
Secondary cartilagenous joint
Intervtebral discs
Symphysis pubis
Manubriosternal joint

Q511. Epithelium of cornea is:
A- Stratified squamous non keratinized
B- Stratified squamous keratinized
C- Simple columnar epithelium
D- Simple squamous epithelium
Ans: A

Q512. Glandular fever (Infectious mononucleosis) infects which cells?
A- T cells
B- B cells
C- NK cells
D- Macrophages
E- Monocytes
Ans: A

Explanation:
Activated – T cell
Atypical Cell – T Lymphocytes
Infected – B cell

Q513. Plasma cells are produced from:
A- T lymphocytes
B- Eosinophil
C- B lymphocytes
D- Megakaryocytes
E- Bone marrow stem cells
Ans: C

Q514. The most common exogenous pigment is:
A. Carbon
B. Silica
C. Nitrate
D. Phosphate
E. Silver
Ans. A

Q515. Endogenous pigment produced in hemolytic anemia?
A. Bilirubin
B. Biliverdin
C. Hemosidrin
D. Hepatoglobin
Ans. C

Q516. Health model to predict compliance OR The most important predictor assesses compliance therapy of patient:
A- Doctors perception of the disease
B- Patients own perception of a severity of disease
C- Patients perception of his role in community
D- Patient role in community
Ans: B

Q517. Confidentiality can be breached only:

A- If patient authorizes u to do this
B- Patient can't afford treatment
C- Insurance claim
D- If parents allow
E- In emergency
Ans: A

Q518. Artery present at the base of pyramids:
A- Arcuate
B- Lobar
C- Interlobar
D- Interlobular
E- Segmental
Ans: A

Explanation:
Interlobar artery passes in between medullary pyramid and at the base of pyramid it turns, run parallel to base of pyramid and form Arcuate artery
Renal columns contain – Interlobar Artery
Capsule contain – Interlobular Artery
Glomerulus contain – Interlobular Artery
Hilum contain – Segmental Artery

Q519. Fat pad of upper eyelid is anterior to which?
A- Orbital septum
B- Muller muscle
C- Orbicularis
D- Levator aponeurosis
Ans: D

Explanation:
Anterior to – Levator Aponeurosis
Posterior to – Orbital septum

Q520. A 6-year-old child with history of joint swelling and bleeding during a circumcision. Raised aPTT. Which test should be done to confirm the diagnosis?
A- Factor V laden
B- Factor 9 assay
C- Factor 8 assay
D- PT
Ans: C

Q528. Child with blood transfusion and iron chelating treatment:
A. Single gene defect
B. Multiple gene defect
C. X linked
Ans. A

Q529. Infectious mononucleosis infects which cells?
A- T cells
B- B cells
C- NK cells
D- Macrophages
E- Monocytes
Ans: A

Explanation:
Activated – T cell
Atypical Cell – T Lymphocytes
Infected – B cell

Q530. ALL occurs in which syndrome? (a scenario with blast cells was given)
A. Down
B. Turner
C. Klinefelter
Ans. A

Q531. A 67 year male presented with generalized body swelling for past two weeks physical examination shows thick waxy skin hepatomegaly and enlarged kidney . 24hr urinary protein was 4g/day. Kidney biopsy show Apple coloured birefringence fibrils under congo red stain. What is the likely diagnosis?
A. SLE
B. Sarcodosis
C. Malaria
D. Mutilple myeloma
E. Hepatitis
Ans. D

Q532. Sign of irreversible cell injury in cardiac cell:
A- Clumping of nuclear chromatin
B- Cellular swelling
C- Cell Swelling
D- Contraction bands in cytoplasm
E- Lysosomal release
Ans: D

Q533. Helmet cells and schistocytes scenario:
A. TTP/ITP
B. Thalassemia
C. Macrocytosis
D. Klienfelter's syndrome
Ans. A

Also know:
Spur cells – Liver disease
Basophilic stippling – Lead poisning
Tear drop cells – Myelofibrosis
Bite cells – G6PD
Helmet cells – TTP, DIC and HELLP syndrome

Target cells – HBC disease, thalassemia
Heinz bodies – G6PD
Howel jolly bodies – Asplenia
Burr cell – Renal disease

Q534. A patient present with anemia wrist drop constipation and peripheral neuropathy. On peripheral film characteristic basophilic stippling is seen. It is caused by:
A- Organophosphate poisoning
B- Arsenic poisoning
C- Lead poisoning
D- Aspirin poisoning
Ans: C

Q535. Causative agent of meningitis in 60 years old man is:
A. S.pneumoniae
B. Staphlococci
C. N.meningitidis
D. H.influenza
Ans. A

Q536. Patient presented with fever, neck rigidity, kerning sign +ve. CSF finding reveal decrease glucose, increase proteins and lymphocytes diagnose is:
A- Acute pyogenic
B- Viral meningitis
C- TB meningitis
D- Fungal meningitis
Ans: C

Q537. A Patient presented with headache, neck stiffness and photophobia on LP glucose 40, Protein 150 and lymphocytes 20% and neutrophils 80% what is diagnose?
A- Bacterial meningitis
B- Viral meningitis
C- TB meningitis
D- HSV
E- Encephalitis
Ans: A

Q538. HIV patient presented with fever neck rigidity and meningeal irritation, halo seen around the organism involving the brain tissue. What is likely cause?
A- Cryptococcus Neoformans
B- Candida Albicans
C- Staph Aureus
D- Chlamydia
E- Gonorrhea
Ans: A (FA)

Q539. Which of the following structures is found only in Gram-negative microorganisms?
A. Cell envelope
B. Exotoxin
C. Peptidoglycan
D. Periplasmic space
E. Teichoic acids
Ans. D

Q540. A 27-year-old sexually active woman has been having greenish vaginal discharge. On histology, a motile pear shaped organism is seen. What could it be?
A. Trichomonas vaginalis
B. Candida albicans
C. Staph aureus
Ans. A

Q541. Which of the following immunoglobulins is raised in acute infection?
A. IgG
B. IgM
C. IgA
Ans. B

Q542. Which of the following could possibly be the reason for candidiasis in infant?
A. Immunosuppression
B. Low temperature
C. Poor feeding
Ans. A

Q543. Which of the following organs can regenerate after injury?
A. Heart
B. Brains
C. Liver
Ans. C

Q544. Most radiosensitive organ is which of following?
A- Skin
B- Testicles
C- Lungs
D- Liver
Ans: A

Explanation:
Regarding sensitivity to radiotherapy:
Lymph node tumor > Seminoma > Glioma > Craniopharyngioma

Old Age + Painless testicular tumor + Raised LDH – Lymphoma
Old Age + Painless testicular tumor + Mature Stem cells – Teratoma
Young + Painless testicular tumor + Raised LDH+ Radiosensitive – Seminoma
Least Radio Sensitive Blood Cell – Platelets
Most Radio Sensitive Organ – Skin
Least Radio Sensitive Organ – Vagina
Most Radio Sensitive Mucosa – Intestinal
Radiation induced Brain malignancy –Meningioma
Overall radiation induced CA – Leukemia

Q545. A woman came to you with palpitations, dyspnea and loss of appetite and neck bruit, what test will you order?

A. ECG and TSH
B. Only TSH
C. Lipid profile
D. Just ECG

Ans. B

Q546. Large friable irregular vegetation seen in:

A- Libman Sac endocarditis
B- Infective Endocarditis
C- Terminal Neoplasm
D- Rheumatoid arthritis

Ans: B

Explanation:

Flat Small to medium Vegetation – Libman Sac Endocarditis
Friable small Vegetation – NBTE
Friable Large Irregular Vegetation – IE

Q547. Test which excludes completely non affected person is?

A- Sensitivity
B- Specificity
C- Prevalence
D- Incidence
E- Accuracy

Ans: B

Explanation:

Sensitivity (true positive)
Detect disease and rule out disease (FA)
Associated with true positive and false negative
Specificity (true negative)
Detect non disease and rule in disease (FA)
Associated with true negative and false positive

Q548. Mental foramen location related to mandible and mental nerve at the level of:

A- 1st premolar
B- 2nd lower premolar
C- 1st upper molar
D- 2nd upper molar
E- Canine

Ans: B

Q549. Lymphatic drainage of external nose & anterior part of nasal cavity is:

A- Submandibular lymph nodes
B- Deep cervical lymph nodes
C- Retropharyngeal lymph nodes
D- Occipital lymph nodes
E- Jugulo omohyoid

Ans: A

Explanation:

External nose & anterior nasal cavity – Submandibular lymph nodes
Posterior nasal lymph nodes – Retropharyngeal lymph nodes & JD nodes
Remaining nasal cavity: Upper deep cervical lymph nodes.

Q550. Dental carries due to: (or infection due to)

A. Bacillus hyaluronidase
B. Lactobacillus
C. Streptococcus hyaluronidase
D. Staph

Ans. C (S. mutans)

Q551. At counselling the mother of a baby with thalassemia major, she should be told about the chances of babies being affected in each pregnancy:

A. 25%
B. 75%
C. 100%
D. 50%
E. 60%

Ans. A (25 % Affected 25 % Healthy 50 % carrier)

Q552. After radiotherapy what will be seen in cells:

A- Karyorrhexis (due to apoptosis)
C- Metaplasia
D- Anaplasia
E- Infarction

Ans: A

Q553. In spleen worn out blood cells come and filter at which part?

A- Capillaries &White pulp
B- Capillaries &Red pulp
C- Marginal zone
D- Red Pulp and Sinusoids

Ans: D

Explanation:

Splenic immunological function – White pulp
Splenic immunological filtration - Red Pulp
In spleen worn out blood cells come at – Red pulp and sinusoid
Antigen presenting portion – Marginal zone

Q554. 14-year-old boy, cervical lymphadenopathy, eosinophilia, CD 15, CD 30 positive, double nucleated cells:

A. Hodgkin's lymphoma
B. NHL
C. Infectious mononucleosis

Ans. A

Q555. Brunner's gland is present in:

A- Small intestine
B- Jejunum
C- Ileum
D- Duodenum
E- Colon

Ans: D

Q556. Organ lined by stratified squamous epithelium with increase vascularity, elasticity, tubular glands in lamina propria?

A- Vagina
B- Uterus
C- Fallopian tube
D- Cervix
E- Ureter

Ans: A

Q557. A woman in kitchen accidently cut her radial artery. Decrease blood pressure, reflex increase in blood pressure by:

A. Post ganglion B fibers
B. Post ganglionic C fibers
C. Post ganglionic A delta fiber
D. Preganglionic A-beta fibers

Ans. B

Q558. A projected stratified squamous keratinized epithelial tissue in the tongue is termed as:

A. Fungiform papilla
B. Filiform papilla
C. Circumvallate papilla
D. Filiform papilla
E. Cingulate papilla

Ans. B

Q559. Taste buds are associated with all except:

A. Filiform papilla
B. Epiglottis
C. Palate
D. Fungiform papilla

Ans. A

Q560. Concerning lingual papilla pick the correct:

A. Filiform papilla has abundance of taste buds
B. Fungiform serves the functions of licking
C. Foliate papillae are not well developed in human

Ans. C

Circumvallate Papillae	Large in size Situated immediately infront of sulcus terminalis Cylindrical projection (truncated cone) Circular sulcus is bound on its periphery by wall (vallum)
Fungiform	Near the tip and margins but some scattered over dorsum Narrow pedicle but large rounded head (like mushroom/fungus) Visible as discrete pink pinheads
Filiform	NO tastebuds present Fingerlike conical Cover presulcal area + dorsum Give characteristic velvety appearance Smallest Most numerous Pointed and covered with keratin
Foliate	Not developed in adult human tongue Their taste buds degenerate in early childhood

Q561. Slide of oral tissue shows finger like process covered by stratified squamous epithelium with core of dense irregular connective tissue, structure is:

A. Fungiform papillae
B. Filliform papillae
C. Palatine tonsil
D. Lingual tonsil

Ans. B

Q562. MHC genes encode MHC antigens present on cell surface function is:

A- Immunity surveillance
B- Immunity activation
C- Immunity recognition
D- Immunity suppressor

Ans: C

Q563. MHC-1 is associated with which of following?

A- CD4
B- CD8
C- CD2
D- NK cells
E- WBC

Ans: B

Explanation:

MHC 1 – CD8
MHC 2 – CD4

Don't confuse with this MCQ

Q. Regarding MHC-1:

A. Associated with HLA genes
B. Present on chromosome 12
C. Present on chromosome 6

Ans. A>C

Q564. For a renal transplant patient where would you take the sample from for HLA matching?

Ans. Buccal mucosa

Q565. For skin stability or collagen type in skin:

A. 2 & 4
B. 1& 3

Ans. B

Q566. Most common opportunistic infection after kidney transplant that because rejection is:

A- EBV
B- HSV
C- Polyoma
D- HIV
E- HPV

Ans: C

Q567. Preservation of microorganisms in lab for long duration is done by:

A. Liquid nitrogen box
B. Freeze at -20 degrees

Ans. B

Q568. One of the following will characterize the onset of menopause:

A. Low estrogen with high FSH and LH
B. Low estrogen with high FSH and low LH.

Ans. A

Q569. A female with sign and symptoms of hyper prolactinoma was diagnosed with pituitary adenoma. The growth of this tumor anteriorly will compress which structure?

A- Cavernous sinus
B- Optic nerve
C- Optic chiasma
D- Optic tract
E- Trochlear nerve

Ans: B

Explanation:

Cavernous Sinus – Laterally
Sphenoid Air Sinus – Inferiorly
Optic Chiasm – Superiorly
Optic nerve – Anteriorly

Q570. Chronic diarrhea in 60-year-old man results in the following acid base imbalance:

A. Normal anion gap metabolic acidosis
B. Metabolic alkalosis
C. Increased anion gap metabolic acidosis
D. Respiratory acidosis

Ans. A

Q571. Following is parasympathetic effect:

A- Relax GIT Sphincter
B- Decreased Heart rate
C- Copious amount of secretion
D- Increase Heart rate
E- Bronchodilation

Ans: A

Sympathetic and Parasympathetic Effects		
Structure	**Sympathetic**	**Parasympathetic**
Eye (pupil)	Dilation	Constriction
Nasal Mucosa	Mucus reduction	Mucus increased
Salivary Gland	Saliva reduction	Saliva increased
Heart	Rate increased	Rate decreased
Arteries	Constriction	Dilation
Lung	Bronchial muscle relaxation	Bronchial muscle contraction
Gastrointestinal Tract	Decreased motility	Increased motility
Liver	Conversion of glycogen to glucose increased	Glycogen synthesis
Kidney	Decreased urine	Increased urine
Bladder	Contraction of sphincter	Relaxation of sphincter
Sweat Glands	↑Sweating	No change

Q572. A Person taken to siachen 12000 feet from sea level develops dyspnea post 12 hours most likely due to:

A- Secondary polycythemia
B- Pulmonary edema
C- Airway obstruction
D- Inflammation
E- Infection

Ans: B

Explanation:

Within 24hr Symtoms – Pulmonary edema.
After 5-6 months Symptoms on returning – Secondary polycythemia

Q573. 53 years old lady admitted in comatose state, blood sugar 400, +4 sugar in Urine, no ketone bodies and albuminuria was found. Most likely complication is:

A. DM-I
B. Sepsis
C. Diabetic ketoacidosis
D. Hyperosmolar hyperglycemia state

Ans. D

Q574. Alpha adrenergic stimulation causes:

A- Cardiac stimulation
B- Bronchodilation
C- Pupillary dilation
D- Vasodilation
E- Increase activity of gut

Ans: C

Explanation:

Sympathetic
Cause radial muscle contraction result in Mydriasis or Dilation of Pupil (A1)
Dilate ciliary muscle (Far vision)
Parasympathetic (M Receptor)
Act on circular sphincter muscle cause constriction or meiosis of Pupil
Contract ciliary muscle (Near vision)

Q575. Tumour suppressor gene was asked which will stop cell division in G1 phase?

A. Myc
B. BRCA
C. P53
D. BCL

Ans. C

Q576. A 2-year Boy from Azad Kashmir with failure to thrive for 6 month comes with Hepatosplenomegaly and pallor, plus pancytopenia and ESR 80, dx:

A. Visceral Lesihmaniasis
B. Gaucher disease
C. ALL

Ans. A

Q577. According to recalls there was a question about "Amenorrhea in an 18-year-old girl who weighs 48 kg with 5'4 heights. All physical examination was normal. Labs were normal too including GnRH. Type of amenorrhea was asked.

A. Primary
B. Secondary

Ans. B (Pt. is underweight)

Q578. Which pressure keeps the lung distended?

Ans. Transpulmonary pressure

Also know:

Q579. Negative intrapleural pressure is due to = lymphatic drainage of pleura * Newly Added MCQ: in 7th March 2016 Paper taken from Pre-Test Physiology *

Q580. Pulmonary alveoli are kept dry by factors that include the:

A. Phagocytic activity of alveolar macrophages

B. Negative interstitial fluid pressure
C. Low vapor pressure of water in inspired air
D. Secretion of surfactant
E. Tight junctions between the alveolar capillary endothelial cells

Ans. B

Q581. Consistent finding of hypokalemia is present in:

A. Inc urinary excretion
B. Dec dietry intake
C. Severe vomiting
D. Severe diarrhea

Ans. Ureterosigmoidostomy > Prolong vomiting

Q582. A student was given a slide of oral tissue. He observed a structure that had narrow pedicle but rounded head, that was covered by stratified squamous epithelium n has a core of dense irregular connective tissue. Sense organs are present. What is the most likely structure?

A. Circumvallate papillae
B. Fungiform papillae
C. Filliform papillae
D. Palatine tonsil
E. Lingual tonsil

Ans. B

Remember:

Filiform papillae are finger like projections with keratinized stratified squamous epithelium.

Q583. In congenital adrenal hyperplasia which of the following enzyme deficiency does not cause hypertention?

A. 21 beta hydroxylase
B. 11 beta
C. 17 alpha

Ans. A

Remember the following concept:

Q584. Congenital adrenal hyperplasia:

A. 17 alpha hydroxylase deficiency
B. 21 alpha hydroxylase deficiency

Ans. 21 a hydroxylase deficiency is most common, and we confirm it by levels of 17 hydroxy progesterone levels which are raised?

Q585. First hormone released after hypoglycemia?

A. Glucagon
B. GH
C. Cortisol

Ans. A

Remember:

Glucagon > EPI > GH > Cortisol

Q586. The pathogenic factor used by staphylococcus aureus in infections like dental caries and cellulitis to aid in dissemination of infection is:

A. Catalase
B. Hyaluronidase
C. Lyase
D. Hydrolase

Ans. B

Q587. A Girl with swollen tender knee history of excessive bleeding after tooth extraction. What is the suitable test for diagnose the cause of bleed?

A- BT
B- APTT
C- PT
D- Factor 8 assays

Ans: A

Explanation:

Hemophilia does occur in girls but very rare.
However, VWB type 3 has same presentation in girl as in hemophilia so we check BT first to rule out these causes.

Q588. A neutropenic hypotensive patient admitted in oncology ward with Hx of dysuria & high grade fever. His blood culture yielded growth of P. aeruginosa. These findings suggest that the disease is a result of the excessive release of the following product:

A- TNF
B- IL 6
C- IL 1
D- Granulocyte Stimulating factor
E- Proteases

Ans: A

Explanation:

Pseudomonas commonly produce – Exotoxin
Pseudomonas Cause fever and Hypotension – Endotoxin
Pseudomonas cause fever by Cytokine – TNF >IL1
Over All Fever – IL 1>TNF

Q589. A 55-Year-old female undergo Hystrectomy for Ovarian Cyst. She then Readmitted due to Pneumonia and Culture sensitivity shows Gram Negative Organism and Develop Shock after 6 days. What is mechanism underlying her Condition?

A- Albumin Loss
B- Increase Vascular Permeability
C- Sodium and Water Loss
D- Decrease Heart Contractility
E- Acute Tubular Necrosis

Ans: B

Q590. A lady presented with acute viral hepatitis, which of the following will be raised in her:

A- CPK
B- Bilirubin
C- ALP
D- AST
E- ALT

Ans: C

Q591. A Patient presented with headach, Neck stiffness and photophobia on LP glucose 40, Increase Protein 400mg/dl and lymphocytes 88% what is diagnose?

A- Bacterial meningitis
B- Viral meningitis
C- TB meningitis
D- HSV
E- Encephalitis

Ans: C

Q592. A lady with history of mild sore throat infection died. Autopsy report shows bilateral adrenal gland enlargement and cortical hemorrhages. Most likely organism involved was:

A. N.meningitis
B. S.aures
C. Step pneumoni
D. Strep meningitis

Ans. A (Waterhouse freidrichson syndrome)

Q593. What is true regarding hematopoiesis in humans?

Ans. T lymphocytes are more than B lymphocytes (T cells 80% and B cells 20%)

Q594. Immune response to glandular fever:

Options could not be recalled by candidates. Please memorize the following points regarding glandular fever (infectious mononucleosis) so that if any question is asked regarding it you can choose the correct option. All of these have been repeated many times in past papers

"About Infectious mononucleosis"

EBV infection results in Lymphocytic leukocytosis.
EBV primarily infects:
i) Oropharynx cause pharyngitis
ii)Liver caue hepatitis, hepatomegaly & elevated liver enzymes
iii) B cell
If mentioned:
Activated then then >> B-cells
Infected then >>B-cell
Disseminated then >>B-cells

CD8+T cell response leads to:

i)T-cell hyperplasia in the periarterial lymphatic sheet of spleen>> Splenomegaly
ii)T-Cell hyperplasia in in lymph node paracortex>>Generalized Lymphadenopathy.
iii) Reactive CD8+T cell in blood>> Atypical Lymphocytes.
If mentioned
(Atypical lymphocytes then>> T-cells)
glandular fever
Transmitted by saliva> kissing disease
Labs
i) For screening>> Monospot test>>
(IgM antibodies cross react with heterophile antibodies or antisheep/antihorse antibodies)
ii)Definative diagnosis/Confirmatory>> EBV viral capsid antigen
iii) Negative monospot test sugeest>>CMV as possible cause of I.M.
*paul bunnel bodies
Increase risk for
i)splenic rupture>> Pt. advised to avoid contact sports for 1 month.
ii)B-cell lymphoma in HIV patients.

Q595. Pregnant lady near term raised ALT and AST, recent history of travel to remote area the causing agent is which of following?

A- Hepatitis A
B- Hepatitis B
C- Hepatitis D
D- Hepatitis C
E- Hepatitis E

Ans: E

Explanation:

Orofecal route – Hep. A >Hep. E
Most lethal Hepatitis – Hep. D
Most common in pregnancy – Hep. A
Most lethal/Remote Area in pregnancy – Hep. E

Q596. A patient was on some antibiotic developed bleeding after some time increased PT and APTT what should be given to reduce bleeding of vitamin K deficiency?
A- Cryoprecipitate
B- FFP
C- Hemcel
D- Whole blood
Ans: B

Q597. A patient of cystic fibrosis presented with prolong diarrhea and petechieal hemorrhages over the body and submucosa vitamin deficient is:
A- Vitamin D
B- Vitamin K
C- Vitamin C
D- Vitamin A
E- Vitamin B12
Ans: B

Q598. A patient was on some antibiotic developed bleeding after some time increased PT what should be given to reduce bleeding?
A- Cryoprecipitate
B- FFP
C- Hemacel
D- Whole blood
Ans: B

Q599. 8-year-Old girl presented with facial pain and mass in mandible which organism related to this most likely?
A- HTL1
B- HIV
C- HHV8
D- EBV
Ans: D

Q600. Anti D antibody is clinically important because:
A- Don't cross placenta
B- Cause hemolytic disease
C- Present in All Rh-
D- It is of IgM nature
E- Present on RBC membrane
Ans: B

Q601. Mother is RH positive fetus is RH negative father is also RH negative what is true?
A- Hemolytic reaction can occur
B- ABO incompatibility can occur
C- Transfusion reaction can occur
D- No risk of hemolytic reaction of newborn
E- Give Anti D antibody
Ans: D

Q602. Characteristic feature of transitional epithelium:
Ans. Dome shaped cells

Q603. Which of the following bacteria that grows at 42C?
A. Vibrio
B. Gonococcus
C. Shigella
D. Coli
E. Salmonella
Ans. Campylobacter > Virbio (FA)

<u>Also know:</u>

Q. Vibro cholera:
A. Grows best at 42c
B. Grows in acidic medium
C. Grow in alkaline medium
Ans. C

Q604. A female had skin pigmentation, abdominal obesity, moon face, hirsutism, what is increased which causing this disease?
A- Glucocorticoids
B- Glucose
C- ACTH
D- Cortisol
Ans: C

Q605. Sequence of events in infective endocarditis:
A- Damaged valve > thrombus > penetration> bacteremia
B- Damaged valve> thrombus > bacteremia, penetration
C- Damaged valve >perforation >thrombus >bacteraemia
D- Damaged valve >bacteremia >thrombus >perforation
E- Bacteremia >thrombus > perforation > emboli
Ans: B (DTBP)

Q606. Anatomical basis of conduction of heart:

A- Gap junctions
B- Intercalated disc
C- Desmin bridges
D- Myosin bridges
E- Short diameter

Ans: A

Q607. Which hormone causes extrahepatic protein catabolism and hepatic protein anabolism?
A. Thyroid hormone
B. Epinephrine
C. Cortisol
D. Growth hormone
E. Insulin

Ans. C

Q608. Type 1 hyperlipidemia underlying pathology:
A. Lipoprotein lipase deficiency
B. LDL receptor defect
C. Pancreatitis
D. Overproduction of VLDL

Ans. A

Q609. Hypoaldosteronism scenario. How to diagnose? (Symptoms were not recalled, just the diagnosis):
A. Plasma renin activity
B. Plasma aldosterone

Ans. B (Both > Plasma aldosterone)

The clinical findings of this condition include hyponatremia, hyperkalemia, metabolic acidosis) These symptoms may cause muscle weakness, nausea, heart palpitations, irregular heartbeat, and abnormal blood pressure.

Q610. A 55-year-old man presented to you with soft nodules on extensor tendons and corneal arcus. Investigation?
A. Lipid profile only
B. Lipid profile and glucose

Ans. A

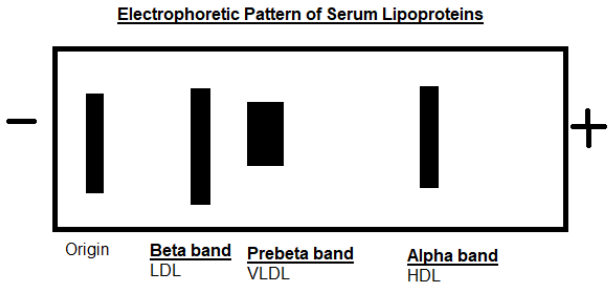
Q611. B band in lipid electrophoresis due to:
A. HDL
B. LDL
C. VLDL
D. Chylomicrons

Ans. B

Explanation:

I have drawn the following diagram to clarify your concepts. Memorize the reason for each band well.

Q612. A old man having urinary tract infection came with fever, pneumonia and BP 80/60mmHg he goes into shock what is the mechanism of his shock?



A- Neurogenic
B- Septic shock
C- Anaphylactic
D- Hypotensive shock

Ans: B

Q613. Cardiac hypertrophy seen on 2D ECHO, interventricular septum was thicker than wall. Which type of hypertrophy is this:
A. Dilated cardiomyopathy
B. Hypertrophic cardiomyopathy

Ans. B (HOCM with myocyte disarray)

Remember: Sudden death in young athlete - HOCM

Q614. In dilated cardiomyopathy which functions is disturbed?
A- Systolic Dysfunction
B- Diastolic dysfunction
C- Both
D- None

Ans: A

Explanation:

In dilated cardiomyopathy there's systolic dysfunction.

In hypertrophic & constrictive cardiomyopathy there's diastolic dysfunction.

Q615. Pregnant lady with labor pain and obstructed labour was taken to the hospital but Died before reaching to hospital most likely cause is:
A- Pulmonary Embolism
B- Amniotic fluid embolism
C- Fat embolism
D- MI
E- Sepsis

Ans: B

Explanation:

Sudden death + SOB – Pulmonary embolism
Bone Fracture +Death After 3-5 days – Fat Embolism
Death during labour or within 24h – Amniotic fluid embolism

Q616. Activated platelets secrete:
A. ADP and thromboxane A2
B. Fibrin degradation products
C. Fibrinogen and thromboxane

Ans. A

Explanation:
Alpha granules secrete fibrinogen, fibronectin, vwf, and PDGF. Dense granules secrete ADP and calcium.

Q617. Enzyme for O_2 dependent killing:
A. Superoxide dismutase
B. Caspase
C. NADPH oxidase

Ans. C

Q618. A newborn baby is noted to have a left unilateral cleft lip. There are no abnormalities of the baby's palate. Which of the following developmental defects accounts for this occurrence?
a. Failure of the left lateral palatine process to fuse with the median palatine process
b. Failure of the left maxillary prominence to unite with the left medial nasal prominence
c. Failure of the right and left medial nasal prominences to merge
d. Failure of the left maxillary process to fuse with the left medial nasal process

Ans: D

Explanation:
Mid line cleft lip is failure of fusion of two medial nasal processes.
Unilateral cleft lip failure of fusion of median nasal process with maxillary process.
Cleft palate failure of fusion of lateral palatine process nasal septum and median palatine process.

Q619. Thalassemia genetics:
Ans. 25% diseased 50% normal 25% minor (as its autosomal recessive)

Q620. According to recalls a question about "hemochromatosis genetics" was asked. So I have included all things regarding its regentics that could've been asked:
Caused by variants in the HFE gene
Autosomal Recessive (25% diseased 50% normal 25% minor) Asssc. with HLA A3

Remember:

Male are more commonly affected than females in = X linked recessive diseases
Carcinoma with autosomal dominant inheritance = Retinoblastoma
Hemophilia is = X linked recessive
Alpha 1 antitrypsin deficiency = Autosomal recessive
Most common type of mendelian disorder = Autosomal recessive
Most common autosomal recessive disorder = Hemochromatosis
Most cmmon autosomal dominant disorder = Von willbrand disease
Most common X linked disorder = Fragile x syndrome

Q621. Streptococcus pneumonia is:
A. Coagulase positive
B. Coagulase negative

Ans. B

Remember:
Staph aureus: Coagulase positive & Catalase positive
Streptococcus pneumonia: Coagulase positive & Catalase negative

Q622. Meningitis in hodgkin's lymphoma agent:
Ans. Cryptococcus

Q623. Fungal meningitis agent
Ans. Cryptococcus

Q624. Cat is denervated at mid collicular level, what will happen?
A- Decerebrate posture
B- Decorticate posture
C- Increased flexor tone of muscle spindle
D- Increase reflexes

Ans: A (Ganong)

Explanation:
At Mid collicular = Decerebrate rigidity >> Inc. Extensors tone in all four limbs.
Below Superior colliculus = Decorticate rigidity >> Inc. flexor tone in upper limbs

Q. Which one of these is also called Paget's disease of breast?
A. Ductal carcinoma in situ (DCIS)
B. Lobular carcinoma in situ (LCIS)

Ans. A

Q625. 72-year-old patient has lost taste sensation on the anterior 2/3rd of the tongue due to injury to which nerve?

A- Chorda tympani
B- Glossophgel
C- Maxilry
D- Trigeminal
E- Lingual

Ans: A

Explanation:

Anterior 2/3 general sensation – Lingual nerve
Anterior 2/3 Taste sensation – Chorda tympani
Posterior 1/3rd Taste sensation – Glossopharyngeal nerve
Posterior most part taste sensation – Vagus

Q626. In response to ACTH zona fasiculata releases:

A. Androgens
B. Glucocorticoids
C. Mineralocorticoids

Ans. B

Zona reticularis (Deepest layer)	Androgens (testosterone, estrogen)
Zona fasciculata	Glucocorticoids (cortisol)
Zona glomerulosa (Most Superficial layer)	Mineralocorticoids (aldosterone)

Remember:

Adrenal medulla constitutes 28% of the mass of adrenal gland. And in Guyton its upto 20%.
Destruction of anterior pituitary gland causes decrease functioning of – Zona fasiculata
Lymphocyte production – principle cells of thyroid
Lymphocyte turn over – cortisol / zona fasiculata

Q627. A 14-year-old football player developed pain in right leg. XRay showed 1cm sharply demarcated radiolucent lesion in the diaphysis of the tibia surrounded by dense sclerotic bone. Most likely diagnosis:

A. Ewing's sarcoma
B. Osteoid osteoma

Ans. B

In Ewing's blue cells present, here typical feature of radiolucent sclerotic tissue on diaphysis of long bone

Q628. Lower orbital wall fracture numbness of lower eyelid and cheek nerve injured:

A. Supra orbital
B. Infraorbital nerve entrapment

Ans. B

Q629. A women deliver a baby with cleft palate and congenital birth defects she give history of taking drug for acne the likely risk factor is:

A- Retinoic acid (Vit. A)
B- Ascorbic acid
C- Iron deficiency
D- Cobalamine
E- Calcium

Ans: A

Q630. In normal distribution curve true is:

A- Mean >Mode
B- Mode>Mean
C- Mean =Median=Mode
D- Median >Mode
E- Median >Mean

Ans: C

Q631. A 30 years old female with no CVS or respiratory ailment is having swelling in front of the neck. She feels difficulty in breathing while in the supine position. What can the type of swelling in this patient?

A- Multinodular Goiter
B- Follicular CA of thyroid
C- Asthma
D- Retrosternal Goiter
E- Colloid Goiter

Ans: D

Q632. A man with RTA, presented with hypotension, was on ventilator, peep has to increased max, still died, autopsy shows macrophages and hyaline membrane, what led him to death?

A- Chronic bronchitis
B- Viral pneumonia
C- Bronchopneumonia
D- Diffuse alveolar damage
E- Patchy Atelectasis

Ans: D

Q633. A girl has bronchial obstruction but alveoli are still aerated by bronchus and

do not collapse this is due to which of following?

A- Sinusoid
B- Clara cells
C- Kulshitsky cells
D- Alveolar pore
E- Intracellular Canaliculi

Ans: D

Q634. A student of final year mbbs witnessing surgery for the first time collapsed in OT due to:

A- Decrease in peripheral resistance
B- Increase vascular permeability
C- Decrease CO
D- Sympathetic shock
E- Vasovagal shock/Decrease venous return

Ans: E

Q635. In decorticate posture, which muscles show hypertonia?

A. Flexors of elbow & extensors of knee
B. Extensors of elbow plus flexors of knee

Ans. A

Q636. A 55-year male with past history of epigastric pain for which he was taking Antacids was diagnosed as gastric lymphoma. What is the most likely cause?

A. Drug induced gastritis
B. Ulcer
C. Intestinal metaplasia
D. Atropic gastritis
E. H.pylori

Ans. E

Q637. 4-month child erythroblastosis fetalis having blood group A+ve need blood transfusion which blood to give?

A. O-ve
B. A+ve
C. A-ve

Ans. C

Q637. In acute blood transfusion reaction which type of antibodies will raised that is hemolysins?

A. IgE
B. IgA
C. IgD
D. IgM

Ans. D

Q638. Baroreceptor firing causes decrease in:

A. Heart rate
B. Venous compliance
C. Coronary blood flow
D. Cardiac Output

Ans. A

Explanation: Inc. baroreceptors firing >dec AV node refractory period > dec HR (FA)

Q639. Sarcomere is present between which of the following?

A- Two A lines
B- Two M lines
C- Two Z lines
D- H Band
E- T Tubules

Ans: C

Q640. Calmodulin similar in structure n function to:

Ans. Troponin C

Q641. In sickle cell anemia patients, the most likely agent causing osteomyelitis is:

A. E.coli
B. Staph. Aureus
C. Strep pyogenes
D. Salmonella

Ans. D

Q642. A young boy presented with complaint of chronic diarrhea not responding to gluten free diet. He also has villous atrophy. Likely diagnosis:

A. Celiac disease
B. Whipple
C. Giardiasis
D. Tropical sprue

Ans. C

Q643. Posterior external arcuate fibers related to which of following?

A- Anterior spinocerebellar
B- Posterior spinocerebellar
C- Spinothalamic tract
D- Cuneocerebellar tract
E- Posterior Dorsal Track

Ans: D

Explanation:

External posterior arcuate – Cunocerebellar
External Anterior arcuate – Pontocerebellar
Internal arcuate – Dorsal medial leminuscus

Q644. Specific feature of treponema pallidum?

Ans. Motile spirochete

Q645. A group of students were studying difference between PO2 and PCO2 in

different arteries of the body. They find major differences between.

A- Aorta and Pulmonary Artery
B- Skeletal muscle arteriole and venule
C- Aorta and Left ventricle
D- Right and Left Ventricle
E- Aorta and Superior Vena cava

Ans: A

Q646. Which organ has highest arteriovenous difference?

A. Heart
B. Lungs
C. Kidney
D. Liver

Ans. A

Q647. Endogenous pigment produced in hemolytic anemia:

A. Bilirubin
B. Biliverdin
C. Hemosidrin
D. Hepatoglobin

Ans. C

Q648. Patient had head injury, she is producing 5L urine daily, has increased thirst, after that her urine osmolarity is 70 and plasma osmolarity is 302, after giving vassopressin, urine osmolarity increase and plasma osmolarity decrease:

A- Central DI
B- Nephrogenic DI
C- SIADH
D- Water deprivation

Ans: A

Q649. A diabetic Patient is advised fasting blood glucose level. At what value doctor is confusing & needs further evaluation with glucose tolerance test?

A. 04 m mol / 1
B. 05 m mol / 1
C. 07 m mol / 1
D. 10 m mol / 1

Ans. C (This is CPSP key, if 7 is not given go for 6.2)

Q650. Acetyl CoA uses which vit as cofactor?

A. Niacin
B. Riboflavin
C. Biotin
D. Thiamine

Ans: ?

Remember:

For acetyl co a its b5
For oxidation of fatty acids its b7

Q651. An astronaut in space for very long time is at risk to develop which chronic problem?

A- Polycythemia
B- Decrease lung compliance
C- Decrease bone mass
D- Decrease surfactant
E- Secondary polycythemia

Ans: C (Space shift osteopenia)

Q652. A child developing recurrent chest infection with otitis media and Diarrhea and there is bronchial wall thickening Pseudomonas was isolated what is diagnosing of this:

A- Asthma
B- Bronchiectasis
C- Emphysema
D- Decrease Surfactant
E- COPD

Ans: B (Cystic Fibrosis induced)

Q653. CD10 is a marker for:

Ans. ALL is CD10+

Q654. Gestational sac is also called?

Ans. Amniotic cavity

Q655. HIV infection in female will cause:

A. Vulvar cancer
B. Endometrial CA
C. Cervical CA
D. Leukemia

Ans. C

Q656. Role of Vitamin A:

A) Integrity of germinal epithelium
B) Integrity of skin
C) Absorption of Ca from GIT
D) For fatty acid metabolism

Ans. A

Q657. Initial step of phagocytosis:

Ans. Opsonization by C3b

Q658. In hypernatremia what will happen?

A- Cell Lysis
B- Degranulation of lysomal enzymes
C- Cell shrinkage
D- Cell swelling
E- Decrease osmolarity of ICF

Ans: C

Explanation:

- ✓ In Hypernatremia water shifts from ICF to ECF as a result of this shift decrease in ICF which causes cell shrinkage
- ✓ RBC in hypertonic sol. to which urea added, RBC will= shrink swell lyse
- ✓ RBC in hypertonic sol. Containing urea, RBC will= shrink swell lyse
- ✓ Rbc kept in urea hypertonic solution, RBC will= shrink swell lyse
- ✓ RBC placed in urea= swell and lyse
- ✓ RBC kept in urea sol=swell and lyse
- ✓ RBC kept in a solution with containing urea=swell and lyse
- ✓ RBC in urea solution, what will happen: swell or shrink= swell
- ✓ RBC in hypertonic solution= shrink transiently
- ✓ RBC in hypotonic solution=swell and lyse
- ✓ Pt infused with large amount of solution that causes lysis of rbc, solution is most likely= hypotonic urea.
- ✓ RBC swell when placed in: urea 250mmol/litre

Feature	Unipolar Neuron	Bipolar Neuron	Multipolar Neuron
Protoplasmic Processes	One	Two	Three or more
Axon		one	one
Dendrite		one	Many
Location	Afferent of PNS and Insects	Retina and Olfactory System	CNS and Efferent of PNS

Q659. Which one has largest cross sectional area?

A- Venules
B- Arteries
C- Arterioles
D- Capillaries
E- Veins

Ans: D

Q670. Neutrophils increased by increase in:

A. IL2
B. IL5
C. G-CSF

Ans. C

Also know:

Q. In hemopoiesis G-CSF and GM-CSF causes:

A. Leucopenia
B. Granulocytosis
C. Erythrocytosis
D. Thrombocytosi

Ans. B

Q. Stem cells producing leukocytes are stimulated by:

A. GCSF
B. IL-3

Ans. B

Note: GCSF is not for all leukocytes

Q660. Bipolar neuron has how many dendrites:

A- 1
B- 2
C- 4
D- 3
E- 5

Ans: A

Q661. Cell line involved in type 1 hypersensitivity reaction?

A. Mast cells
B. Eosinophils

Ans. A

Q662. Which cell organelle principally performs the function of packaging materials to be delivered either to the intracellular targets or secreted outside the cell? OR which organelle packages materials in the form of secretory vesicles?

A. RER
B. Golgi apparatus
C. SER
D. Lysosomes

Ans. B

Q663. Diagnostic feature of plasmodium falciparum:

A. Black water fever
B. DIC
C. Hemolytic anmeia
D. Hypoglycemia
E. Nephrotic syndrome

Ans. A (blackwater fever is due to hemolysis caused by p. falciparum)

Know the difference from this MCQ:

Q. A 16-year boy presented to OPD with 104 fever for last 4 days and prescribed antimalarial for fever After 12 h he

presented with cola colored urine. What is the cause?

A- G6PD
B- Black Water fever
C- Drug induced jaundice
D- Paroxysmal nocturnal hemoglobinuria
E- Hemaolytic yremic syndrome

Ans: A

Q664. Clinically significant for tumor is:

A- Nature of tumor
B- Grading
C- Type of tumor
D- Staging

Ans: D

Q665. A naked person in AC room with temperature 21, humidity 80%, heat loss will be through

A- Increase loss by prespiration
B- Radiation and conduction
C- Radiation
D- Conduction

Ans: B (Prefer radiation + Conduction + Convection)

Explanation:

Patient naked heat loss by – Radiation
Patient naked and lying on surface (table) heat loss by – Conduction
Patient naked and temp mention heat loss by – Radiation + Conduction
Patient naked and humidity mention heat loss by — Convection

Q666. Goblet cells are present in:

A- Proximal bronchiole
B- Trachea
C- Alveoli
D- Bronchi

Ans: D

Explanation:

Clara cells present in – Terminal bronchioles
Goblet cells present in – Bronchi or tertiary bronchus

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February – 2021

Q1. Adult with low serum calcium and ionic calcium, high serum phosphate, increased PTH, normal alkaline phosphate, most likely:

A. CRF
B. Osteomalacia
C. Hyperparathyroidism
D. Bone metastases

Ans. A

Bone Disease	Ca^{++}	Phosphate	Alkaline Phosphatase
Osteoporosis	Normal	Normal	Normal
Osteomalacia	↓	↓	↑
Paget's	Normal	Normal	↑↑
Myeloma	↑	↑,Normal	Normal
Bone Metastasis	↑	↑,Normal	↑
1^{o} Hyperparathyroidism	↑	↓,Normal	Normal, ↑
Hypoparathyroidism	↓	↑	Normal
Renal Failure	↓	↑	Normal, ↑

<u>Clarify your concepts with this MCQ</u>

Q. A 4-year-old boy came with fracture of arm his test reveals calcium 6.8 mg /dl urinary calcium was 50 when BP cuff is applied he developed tetany. What could be the diagnosis?

A. Rickets
B. Primary hypoparathroidism
C. Secondary hypoparathyroidsm

Ans. C

	Primary Hyperparathyroidism	Secondary Hyperparathyroidism	Tertiar Hyperparathy
Calcium	↑	↓/N	↑
PTH	↑	↑	↑↑
Phosphate	↓	↑/N	↑

Q2. The metabolite of vitamin D most commonly measured in lab for assessment of vit. D status:

A. 1,25 dihydroxy D
B. 1 alpha hydroxylase
C. 25 hydroxy vitamin D
D. Cholecalciferol
E. Ergosterol

Ans. C

Q3. A man having joint pain and renal stones with high level of calcium, high PTH, normal PTHrp, low phosphate this is related to which of following?

A- Pseudohypoparathyroidism
B- Primary hyperparathyroidism
C- Secondary hyperparathyroidism
D- Vitamin D deficiency
E- Myeloma

Ans: B

Q4. Yeast resistant to eccinocandin

Ans. Cryptococcus > Candida albicans

Q5. A 44-year-old woman with a recent diagnosis of small cell lung cancer presents to the emergency room with her partner. She had reported some nausea and feelings of malaise yesterday. Today, she continued to feel unwell, and reported feeling lethargic and weak. She is oriented to person and place but not to time. On physical exam, she is noted to have normal skin turgor and no edema. Laboratory testing reveals hyponatremia and decreased serum osmolality.
↓ serum osmolality (< 275 mOsm/kg)
↑ urine osmolality (> 100 mOsm/kg)
What could be the diagnosis?

A. Cushings
B. Addisons
C. SIADH
D. Diabetes insipidus

Ans. C

<u>Don't confuse with this:</u>

Q. A pt with urine osmolarity 1200. Serum osmolarity 350. What is the cause?

A. SIADH
B. DI
C. Nephrogenic DI
D. Water deprivation

Ans. D

<u>Also know:</u>

SIADH diagnostic test = Serum osmolarity

Q6. A female patient 45 years of age presented to you with orthostatic hypotension, depression, pigmentation of buccal mucosa. She has decreased neutrophils. Increased lymphocytes and eosinophils. ACTH level is increased; there is also hyperkalemia and hyponatremia. Diagnosis?

A. Cushing's syndrome
B. Cushing's disease
C. Ectopic ACTH
D. Addison's disease

Ans. D

Q7. A patient with pyloric stenosis and history of recurrent duodenal ulcers

has chronic vomiting, the most likely biochemical abnormality in this case would be:

A. High seum bicarb
B. Hypokalemia
C. Hyponatremia
D. Hypovolemia

Ans. B (hypokalemic hypochloremic metabolic alkalosis)

Q8. Fusion of ischiopubic rami at:

A. 7yrs
B. 21yrs
C. 1yr
D. 25years

Ans. A

Q9. In hereditary spherocytosis defective protein is which of following?

A- Fibrillin
B- Titin
C- Dystrophin
D- Spectrin
E- Ankyrin

Ans: D

Q10. Right atrium infarction involves which of following?

A- Septomarginal band
B- Moderator band
C- Pectinate muscle
D- Papillary muscle
E- Trabeculae

Ans: C

Q11. Scenario of history of maxillary fracture wiring done, 3 years after the procedure patient presented with pus/abscess what will be the organism found in this abscess?

A. S. aureus
B. S. virdians
C. S. pneuminae

Ans. A

Q12. Farmer with abscess on leg containing sulphur granules is caused by:

A. S. aureus
B. Brucellosis
C. Actinomycosis
D. Amebiasis
E. Histoplasmosis

Ans. C

Q13. 6 yrs old boy presented with sore throat & fever. His microbiological review shows complete hemolysis on sheep blood agar. Most likely diagnosis is?

A. Group A beta hemolytic strep
B. Staph aureus
C. Group B strep
D. Diphtheria

Ans. A

Beta hemolysis (complete hemolysis) Clear zones around colonies	Group A and B streptococcus
Alpha hemolysis (partial hemolysis) Green zones around colonies	Streptococcus pneumonia
Gamma hemolysis (No damage to RBCs)	S. mutans and Group D streptococcus

Q14. Female with palpitations weight loss, infections and deranged glycemic control (fasting 180, random 300+). What to do next?

A. HBA1C
B. TSH
C. Lipid profile

Ans. B

Q15. 21-year female with abdominal distention, pallor, microcytic hypochromic picture. Which test will you do?

A. Ferritin
B. Hb electrophoresis

Ans. B

Q16. Which among the following is an endogenous black pigment?

Ans. Melanin

Q17. Endogenous pigmentation causes:

A. Hemochromatosis
B. Hemosiderosis
C. Melatonin

Ans. B

Q18. Yellow discoloration of skin, sclera and oral mucosa (jaundice) is due to:

A. Bilirubin
B. Hemosiderin
C. Silver
D. Lead

Ans. A

Q19. A 65-year-old man presents to his primary care physician for right upper quadrant abdominal pain. He was diagnosed with hepatitis C infection, complicated by hepatic cirrhosis. Abdominal ultrasound demonstrates a focal hepatic lesion. He underwent a multi-phase contrasted abdominal CT scan, which demonstrated an enhancing focal hepatic mass during the arterial phase with rapid washout during the portal venous phase. Which of the following markers will localize the primary site of this cancer?

A. AFP
B. CEA
C. CA125
D. CA19-9

Ans. A

Q20. Patient came with generalized edema. Urine complete examination reveal proteinuria, cause is:

A- Salt and water retention
B- Hypoalbuminemia
C- Increase hydrostatic pressure
D- Increase oncotic pressure
E- Portal HTN

Ans: B

Q21. A 6-year-old boy is brought to the emergency department by his mother due to swelling around his eyes and legs. The mother reports that the patient recently recovered from an upper respiratory tract infection. Physical exam is significant for periorbital and lower extremity edema. Laboratory testing is significant for hypoalbuminemia and normal complement levels. Urinalysis demonstrates 4+ protein. A presumptive diagnosis of minimal change disease is made and the patient is started on steroid therapy. Type of edema in nephrotic syndrome is:

A. Generalized
B. Localized

Ans. A

Q22. Type of hypersensitivity in lupus nephritis?

A. Hypersensitivity type III
B. Hypersensitivity type IV
C. Hypersensitivity type II

Ans. A

Q23. Blood transfusion started, within 15 mins patient had fever and difficulty breathing, type of hypersensitivity reaction will be:

A. Type 1
B. Type 2
C. Type 3
D. Type 4

Ans. B

Remember:

During blood transfusion – Type 1
After blood transfusion – Type 2

Q24. What makes mycobacterium tuberculosis resistant to staining by aqueous dyes?

A. Waxy layer
B. Thick lipid layer
C. Hydrophobic lipids layer

Ans. A (Mycolic acid > Waxy layer)

Remember:

Tuberculosis has an unusual, waxy coating on its cell surface primarily due to the presence of mycolic acid. This coating makes the cells impervious to Gram staining.

Q25. In a man diagnosed with Hodgkin's lymphoma reed Sternberg cells are seen along with inguinal lymphadenopathy bilaterally and spleen is involved. Which stage of Hodgkin's lymphoma is this?

A. Stage 1
B. Stage 2
C. Stage 3A
D. Stage 3B
E. Stage 4

Ans. C

Remember:

A = No B symptoms
B = Presence of B symptoms like weight loss, night sweats, fever.

Stage I	HL cells found in a single lymph node region
Stage II	HL cells found in two or more lymph node regions on the same side of the diaphragm
Stage III	HL cells found in lymph node regions on both sides of the diaphragm (above and below), possibly with localized involvement of an organ outside the lymphatic system or the spleen
Stage IV	HL cells have spread widely into one or more organs

Q26. Which of the following is called "good cholesterol"?

A. LDL
B. VLDL
C. HDL
D. Chylomicrons

Ans. C

Q27. A man presented to you with eruptive xanthomas and raised chylomicrons, the type of hypercholesterolemia is:

A. Type 1
B. Type 2
C. Type 3
D. Type 4

Ans. A

Type	Lipoprotein fraction elevated	Cholesterol elevated	TAG level	Metabolic defect	Features
Type I (Familial LPL deficiency)	Chylomicrons	Normal	↑↑	Lipoprotein lipase deficiency	Eruptive xanthoma, Hepatomegaly, Pain abdomen
Type IIA (Familial hypercholesterolemia)	LDL	↑↑	Normal	LDL receptor defect, Apo B ↑	Atherosclerosis, CAD, Tuberous xanthoma
Type IIB (Familial combined hyperlipidemia)	LDL, VLDL	↑↑	↑↑	Apo B ↑ Apo C – II	Corneal arcus
Type III (Familial dys-beta-lipoproteinemia)	Broad beta VLDL, Chylomicrons	↑↑	↑↑	Abnormal Apo E Apo C – II ↑	Palmar xanthoma, High incidence of vascular disease
Type IV (Familial hypertriglyceridemic)	VLDL	↑↑	↑↑	Over production of VLDL Apo C – II ↑	Associated with DM, Heart disease and Obesity
Type V (Endogenous hypertriglyceridemia)	VLDL, Chylomicrons	Normal	↑↑	Secondary to other causes	Chronic pancreatitis

Q28. A man had history of early MI. He has presented to you with Achilles tendon xanthomas, type of hypercholesterolemia:

A. Type 1
B. Type 2
C. Type 3
D. Type 4

Ans. B

Explanation:

- ✓ Pruritic xanthomas – Type 1
- ✓ Achilles xanthomas – Type 2
- ✓ Palmar xanthomas – Type 3

Q29. A 17-year-old boy is seen after his annual colonoscopy. His mother and his older brother both died of colorectal cancer. Since 12 years old, he has been screened annually for colorectal cancer. This year, several hundred polyps are seen in his colon. Based on his own readings and his physician's recommendation, he decides to undergo prophylactic colectomy. Which of the following is an autosomal dominant disorder associated with family history of colon cancer along with multiple polyps in GIT?

A- Familial adenomatous polyposis
B- Tay sach disease
C- Villous adenoma
D- Multiple sclerosis
E- Tubular adenoma

Ans: A

Q30. Vitamin C deficiency will effect:

A- Hydroxylation of Proline and lysine
B- Hydroxylation of Proline and leucine
C- Hydroxylation of Proline and cysteine
D- Hydroxylation of Lysine and Cysteine
E- Hydroxylation of leucine and lysine

Ans: A

Q31. Anti Hbc +ive, HbsAg -ive, HbeAg – ive:

A. Window period
B. Transient resolving phase
C. Past exposure

Ans. A

Memorize this table by heart conceptually, as stem may be changed

	HBsAg	Anti-HBc	HBsAb*
Acute infection	Positive	IgM positive	Negative
Infection resolved	Negative	IgG Positive	Positive
Chronic infection	Positive	IgG Positive	Negative
Vaccinated	Negative	Negative	Positive
Susceptible	Negative	Negative	Negative

Q32. For a renal transplant patient where would you take the sample from for HLA matching?

Ans. Buccal mucosa

Q33. 60-year-old man presented in OPD with complain of hematuria and increase urinary frequency on DRE there is stony hard mass felt that is prostate lymphatic drainage of it:

A- Deep inguinal
B- Internal iliac and Sacral
C- Superficial inguinal
D- Common iliac
E- Para aortic

Ans: B

Q34. Which of the following is the second abundant component of protoplasm of cells?

A. Carbohydrate
B. Lipids
C. Proteins
D. Electrolytes

Ans. C (After water)

Q35. Basal bodies are formed by:

A- Centrioles
B- Centrosome
C- Precentrioles
D- Lysosomes
E- Peroxisomes

Ans: A

Q36. A female had aortic root dilation up to 4cm, ocular examination showed lens dislocation. mitral valve leaflet defect with a systolic click defect in which of the following?

A- Acquired deficiency of fibrillin
B- Inherited deficiency of fibrillin
C- Inherited deficiency of laminin
D- Acquired deficiency of Spectrin

Ans: B

Q37. Duchenne muscular dystrophy defective gene makes the cell impermeable to which of the following?

A. Amino acid
B. Water
C. Electrolytes
D. Protein

Ans. D

Q38. A 55-year-old man with Mediterranean ancestry presents with jaundice and hemoglobinuria. He also reports being unusually tired and believes this may

be due to his recent recovery from malaria during which he took primaquine. He was found to be anemic with a hemoglobin of 9 g/dL. His peripheral blood smear revealed bite cells and Heinz bodies. His hemolysis will be aggravated if he is given:

A. Sulphonamides
B. Paracetamol
C. Brufen
D. Motilium

Ans. A (G6PD deficiency)

Remember:

Drugs which carry a definite risk of hemolysis in a patient with glucose-6-phosphate dehydrogenase deficiency:

1. Antimalarials: primaquine, dapsone / chlorproguanil
2. Sulphonamides / sulphones: sulphamethoxazole and others, dapsone
3. Antibacterial / antibiotics: Cotrimoxazole, nalidixic acid, nitrofurantoin, niridazole.
4. Antipyretic / analgesics: acetanilide, phenazopyridine (pyridium)
5. Other drugs: naphthalene, methylene blue

Q39. A white male is found to have liver nodules, pancreatic insufficiency and positive sweat chloride test. What could possibly be the diagnosis?

A. Amyloidosis
B. Hemosiderosis
C. Hemochromatosis
D. Cystic fibrosis

Ans. D

Q40. 30-week pregnant lady tell that she has consumed moderate amount of alcohol during 1st trimester what is risk to baby?

A- Microcephaly
B- Delayed birth
C- Edward Syndrome
D- Epicanthal fold
E- Short Nasal Bridge

Ans: A

Q41. A mentally retarded 14-year-old boy has a microcephalic and low ear epicanthal fold and protuberance of tongue Chromosome analysis is likely to demonstrate which of the following?

A- Trisomy 21
B- Trisomy 18
C- Trisomy 13
D- Fragile X syndrome
E- Trisomy 23

Ans: A (down syndrome)

Q42. Down's syndrome has increased risk of:

A. ALL
B. CLL
C. CML
D. AML

Ans. A

Q43. Vitamin needed for protein metabolism is:

A- Riboflavin
B- Thiamine
C- Biotin
D- Pantothenic acid
E- Vitamin E

Ans: A

Explanation:

For Carbohydrates – Thiamine
For Proteins – Riboflavin
For Lipids – Biotin

Q44. Vitamin needed for carbohydrate metabolism is:

A- Riboflavin
B- Thiamine
C- Biotin
D- Pantothenic acid
E- Vitamin E

Ans: B

Explanation:

For Carbohydrates – Thiamine
For Proteins – Riboflavin
For Lipids – Biotin

Q45. Child presented with vomiting, poor feeding, urine like maple syrup burnt sugar. Which enzyme is deficient in liver? OR Maple syrup urine disease is caused by deficiency of:

A. Phenylalanine Hydroxylase
B. Alpha ketoacid dehydrogenase
C. Homogenetic acid synthetase

Ans: B

Q46. Which of the following stimulate RBC growth?

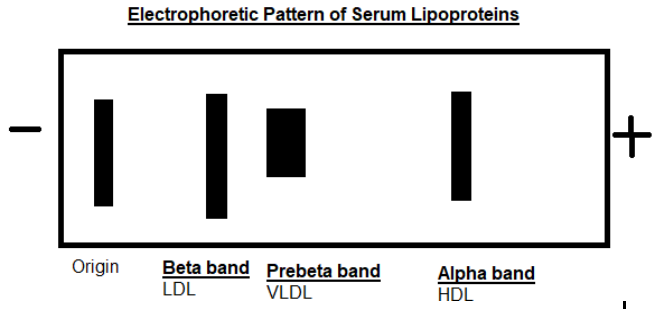
A. IL2
B. IL6

C. IL3
D. IL1
Ans. C
Remember: RBC (1+1+1)=3 so IL3

Q47. Which of them increase in hepatocyte damage?
A. SGPT
B. SGOT
C. GGT
Ans. A
Remember: SGPT is also called alanine amino transferase (ALT)

Q48. Which of the following is a marker of osteoblastic activity?
A. Acid Phosphatase
B. Alkaline phosphatase
C. CEA
D. Alpha fetoprotein
Ans. B
Remember:
Osteoclasts in – Howhship lacunae
Osteoblast – Bone making cells + Produce ALP+ Laid Bone Matrix
Osteoclast – Bone Resorption
Osteocytes – Maintain Bone Matrix & Integrity

Q49. B band in lipid electrophoresis due to?
A. HDL
B. LDL
C. VLDL
D. Chylomicrons
Ans. B
Explanation:



Q50. Friedwald formula is used to determine percentage of:
A. HDL cholesterol
B. LDL cholesterol
C. Total cholesterol
D. VLDL cholesterol
Ans. B

Q51. Post splenectomy infection organisms:
A. Pneumococcus
B. Meningococcus
C. H. influenza
D. Encapsulated bacteria
Ans. A (all but prefer Pneumococcus > H. Influenza > Neisseria meningitides)

Post splenectomy findings:
Howell-Jolly bodies (nuclear remnants)
Target cells
Thrombocytosis (loss of sequestration and removal)
Lymphocytosis (loss of sequestration)
Increase Risk of infection by encapsulated organisms (pneumococci, Hib, meningococcal).

Q51. Virulence factor for streptococcus pneumonia is:
A. Streotolysin
B. Pneumolysin
C. Capsule
Ans. C > B
Remember:
✓ Virulence: Capsule > Pneumolysin
✓ Pneumolysin: Alpha hemolysis
✓ Streptolysin: Beta hemolysis

Q52. Square root of variance = Standard deviation.

Q53. Bacteria enter in body after injury what will happen first?
A. Activation of NK celss
B. Stimulation of complement protiens
Ans. B (C3b complement binds bacteria for opsonization)

Q54. A boy was talking in class room teacher got irritated and asked him to lower pitch of voice muscle responsible is which of following?
A- Vocalis
B- Cricothyroid
C- Thyroarytenoid
D- Post cricoarytenoid
E- Lateral cricoarytenoid

Ans: C

Q55. Structure damaged during surgery of inferior thyroid gland:

A- Parathyroid
B- Recurrent laryngeal nerve
C- Carotid sheath
D- Parathyroid

Ans: B

Explanation:

Upper Lobe – ELN
Lower Lobe – RLN
Superior thyroid artery related to – ELN
Inferior thyroid artery related to – RLN
Superior laryngeal artery related to –Internal laryngeal nerve
Most common nerve injured during thyroidectomy – ELN
Most common nerve injured during tracheostomy – RLN

Q56. Immunoglobulin class produced in aspergillosis:

A. IgG
B. IgM
C. IgE
D. IgA

Ans. C

Q57. 1st heart sound is due to:

A- Rapid ejection
B- Rapid filling
C- Isovolumetric relaxation
D- Isovolumetric contraction
E- Slow Ejection

Ans: D

Explanation:

First heart sound – Isovolumetric contraction (Closure of mitral and tricuspid valve)
Second heart sound – Isovolumetric relaxation (Closure of aortic and pulmonary valve)
Third heart sound – Rapid ventricular filling (Normal in children pregnancy and athletes)

Q58. In IV drug abusers what is the causative organism for infective endocarditis?

A. S. aureus
B. S. viridans
C. S. pneumonia
D. S. bovis

Ans. A

Remember:

Abuser = Aureus
Most common = Viridans
Sub-acute = Viridans
Acute = Aureus
Post valve replacement within 60 days = epidermidis.

Q59. 13 years old has sore throat and joint pain what investigation will be best to reach diagnose?

A- ASO titres
B- Throat swab
C- Immunoassay
D- Leukocyte culture

Ans: B

Explanation:

Initial – ASO
Best Diagnostic – Throat culture > Blood culture

Q60. Corynebacterium diphtheria stain used:

A. Silver mathacholine
B. Methylene blue
C. Albert's stain

Ans. C

Remember:

Culture: Loeffler > Tellurite

Q61. A 12yr old girl undergoes bone marrow transplant as a part of therapy for ALL. She subsequently presents with pulmonary complains and neurologic findings. Lung biopsy reveals granulomatous vasculitis with associated atypical lymphocytes. Clonality study reveals monoclonal B cell population with associated T cells. What infectious agent related to this diagnosis?

A. CMV
B. EBV
C. HPV
D. HHV8
E. Chlamydia pneumonia

Ans. A

Q62. Vibrio cholera:

A. Grows best at 42c
B. Grows in acidic medium
C. Grow in alkaline medium

Ans. C

Q63. Patient presented in OPD with an ulcer on distal shaft of penis most definite lab test (primary syphilis scenario). Which investigation will you do next?

A. TPA
B. Dark field microscopy
C. FAS AB
D. VDRL

Ans. B

(Biopsy with dark field illumination is the diagnostic test of choice for primary syphilis i.e. with chancre KAPLAN)

But if asked:

Q. Best confirmatory serological test for syphilis is:

A. VDRL
B. TPPA
C. TPHA
D. FTA-ABS

Ans. D

Q64. A female having curdy white vaginal discharge, vaginal swab sample shows pseudohyphae. What organism is it?

A. Gonnorhera
B. Syphlis
C. Candida albicans
D. Chlamydia

Ans. C

Different types of vaginal discharge:

- ✓ Curdy white vulvovaginal pruritus is candida. There may be history of diabetes immunocompromised patient pregnancy, broad spectrum antibiotics.
- ✓ Yellowish or pinkish vaginal discharge trichomonas.
- ✓ Thin discharge, fishy amine odor, malodorous especially when 20% potassium hydroxide added. Clue cell on pap smear. Is due to bacterial vaginosis (gardnerela)

Q65. Reservoir of plague is rats, and the vector is:

A. Ticks
B. Mites
C. Fleas
D. Flies

Ans. C

Q66. 40 years old male drink water from a stream developed mild diarrhea for 3 weeks along with two children who developed same symptoms too. Diagnosis?

A. Cholera
B. Giardiasis
C. E. coli

Ans. B

Q67. A 38-year-old recent immigrant from Brazil comes into the clinic with a 4-month history of painless, ulcerated plaques on his face. He denies fever, fatigue, or weight loss. Physical exam revealed ulcers of varying sizes on the left arm, covered with a yellow-white fibrinous material. There are no mucosal lesions, pallor, lymphadenopathy, or hepatosplenomegaly. A complete blood count and liver function test were within normal limits. HIV serology, AFB for lepra bacilli, and serum VDRL were all negative. Histopathological exam of a skin biopsy showed amastigotes inside histiocytes and inflammatory cells. Diagnosis?

A. Visceral leishmaniasis
B. Cutaneous Leishmaniasis
C. Malaria
D. Black water fever

Ans. B

Q68. An immunodeficient woman developed was recently diagnosed with CA cervix. Which of the following viruses could be responsible?

A. EBV
B. HIV
C. CMV

Ans. B

Q69. About pandemic:

A. Antigenic shift
B. Antigenic drift

Ans. A

Remember:

Antigenic Shift = Pandemics
Antigenic Drift = Epidemics

Q70. A Patient presented with coryza, maculopapular rash, postauricular lymphadenopathy, conjunctivitis Most like organisnm responsible for this clinical presentation is which among these?

A- Rubella virus
B- Picarna
C- Polyoma virus
D- Orthomyovirus

E- Adeno

Ans: A

Q71. Distended abdomen in pregnancy is due to:

A. Reversible changes to physiological stimuli
B. Reversible changes to pathological stimuli

Ans. A

Q72. Coagulative necrosis seen in:

A- Brain
B- Kidney
C- Heart
D- TB

Ans: C

Q73. Athletic female with 3 month history of amenorrhea O/E otherwise healthy, Workup of FSH , LH , Prolactin , were all normal what is most likely diagnosis?

A. Hypothalamic amenorrhea
B. Pituitary adenoma
C. Ovarian or adrenal failure
D. Genetic syndrome

Ans. C

OR female with 3 months amenorrhea. Pregnancy test negative? What test to do?

a) FSH LH Prolactin
b) 21st day progesterone

Ans. A

Q74. TB granuloma has:

A. Dystrophic calcification
B. Metastatic

Ans. A

Dystrophic Calcification	Metastatic Calcification
Calcium deposition in dead or degenerated tissue	Occurs in apparently normal tissue
Calcium metabolism normal	Calcium metabolism deranged
Serum calcium level normal	Hypercalcemia
Irreversible	Reversible
Examples: Necrosis, thrombi, hematomas, damaged heart valve, papillary CA of thyroid, meningioma, mockeberg's medial sclerosis	Examples: Hyperparathyroidism (CRF), Bony destructive lesions like CA or multiple myeloma, hypercalcemia in breast cancer, prolonged immbolization

Q75. IUCD removed after a month of abdominal pain, cells seen were lymphocytes, macrophages, plasma cells, and neutrophils:

A. Chronic inflammation
B. Acute inflammation

Ans. A (Chronic inflammation > Granulomatous inflammation)

Q76. Brain tumour seen with immunohistopathology showing GFAP + cells. This is malignancy of which cells?

A. Ependymal cells
B. Astrocytes
C. Glial cell
D. Schwann cells

Ans. B

Q77. Peripheral neuropathy secondary to diabetes which layer is defective?

A. Epineurium
B. Perineurium
C. Endomeurium
D. Endothelial cells

Ans. D (Non enzymatic glycosylation of endothelial cells happens)

Q78. Child with jaw tumour, asked about second most common cause of tumors in children in jaw/head and neck:

a) Ewing sarcoma
b) Nasopharyngeal CA

Ans. B

The were no other recalls regarding options.

In this case prefer Nasopharyngeal CA > Ewing sarcoma

But also know that according to "Surgical management of head and neck pathologies by Brian Sun" the most common pediatric head and neck pathologies are as follows:

Lymphomas > Thyroid > Neural > Soft tissue sarcoma

Q79. Cutaneous horn on forehead is:

A. Hyper keratosis
B. Parakeratosis
C. Metaplasia
D. Dysplasia

Ans. A

Q80. Bladder cancer in a chemical industry worker due to:

A. Vinyl chloride
B. Aryl amines
C. Irritation
D. Arsenic

E. Vinyl chloride

Ans: B

Q81. Philadelphia chromosome translocation 9:22 is present in which of the following?

A- CML
B- ALL
C- AML
D- CLL

Ans: A

Q82. Plasma half-life of a drug depends on its:

A. Rate of clearance
B. Volume of distribution

Ans. A

Remember:

Volume of distribution = Bioavailability

Plasma half-life = Rate of drug clearance

Q83. Sublingual nitro-glycerine absorbed in which vein?

A- Lingual vein
B- Sublingual vein
C- Deep lingual vein
D- Dorsal lingual vein
E- Submental vein

Ans: B

Q85. A young farmer while spraying suddenly collapsed in his fields and was brought to ER. O/E he was frothing but no salivation and no excessive lacrimation. He is suspected case of OP poisoning. What other sign he will have?

A. Bradycardia
B. Bronchoconstriction
C. B/L Pin point pupils
D. Dry skin
E. Hoarseness

Ans. C>B (organophosphate poisoning)

Q86. Erythropoietin acts by:

A. cAMP
B. cGMP
C. Tyrosine kinase
D. JAK/stat patway

Ans. D

Q87. 2nd order neurons of anterior spinothalamic tract lie in?

A. Substantia gelatinosa
B. Thalamus

Ans. A

Q88. A 4-year-old boy presents to the emergency room with abdominal pain. His mother reports that he also had a rash for about a week on his lower extremities as well as joint pain and blood in his urine. Physical exam reveals palpable purpura on his buttocks and bilaterally on his legs and abdominal tenderness. On laboratory evaluation, there is no thrombocytopenia. The physician reassures his mother that this will resolve on its own and he will be monitored for renal involvement. Diagnosis?

A. TTP
B. vWD
C. Henoch Schonlein Purpura
D. ITP

Ans. C

Q89. When to do fumigation in a room?

A) A cardiac OT with patient develop post-surgical infection
B) Patients of dengue in a room
C) Spread of infectious agent
D) Patient of measles in a room
E) Plague patient discharged

Ans. This is controversial

Influenza H1N1 > plague > cardiac OT

DISEASES REQUIRING ISOLATION

1. Severe influenza cases	2. SARS
3.Open case of tuberculosis	4. Anthrax
5. C. diphtheria	6. Pertussis
7. Chicken pox	8. Pneumonic plague
9. Patients suffering from multi-drug resistant pathogens	10. Patients with low immunity

Source: Swachhta Abhiyaan Guidelines for Public Health Facilities

Q90. 55-year-old woman of CRF presents to the clinic. Lab tests demonstrates hypercalcemia and hyperphosphatemia. The patient reports some mild diffuse abdominal pain over the past 2 weeks but otherwise denies any chest pain, palpitations, or fatigue. PTH level is also high:

A. Primary hyperparathyroidism
B. Secondary hyperparathyroidism
C. Tertiary hyperparathyroidism

Ans. C

	Primary Hyperparathyroidism	Secondary Hyperparathyroidism	Tertiary Hyperparathyroidism
Calcium	↑	↓/N	↑
PTH	↑	↑	↑↑
Phosphate	↓	↑/N	↑

Q91. Microscopic slide of liver shows portal vein hepatic artery and bile duct at periphery and central vein in center:

a) Hepatic lobule
b) Portal acinus
c) Hepatic acinus

Ans. A

Q92. Cell junctions allowing exchange of cytoplasmic molecules between two cells are called:

A. Gap junctions
B. Tight junctions
C. Desmosomes

Ans. A

Q93. A medical student is examining a slide under the microscope but he is unable to differentiate the gallbladder different from the colon; the point which will help him in differentiating the gallbladder from colon histologically will be?

A. Muscular layer arranged in 3 layers in the gallbladder wall
B. Columnar epithelium in gallbladder wall
C. Peyer's patches in the gallbladder wall
D. No submucosa in the gallbladder wall
E. No serosa in the gallbaldder wall

Ans. D (There is no muscularis mucosae/submucosa in GB)

Q94. Structure with columnar epithelium with muscular clefts/folds and smooth muscle some area cilia some not, layers of smooth muscle

A. Uterus
B. Fallopian tube
C. Cervix

Ans. B

Remember:

- ✓ Columnar epithelium with Crypts –Uterus (Uterus also has middle layer of indistinct smooth muscle)
- ✓ Columnar epithelium with Crypts - Endo cervix
- ✓ Columnar epithelium with Clefts- Fallopian tube

Q95. A morbidly obese female died from heart failure on autopsy her heart was 900gm (nrml 400gm). On histology there were adipose cells with nuclei pushed to the side. This can be best described as:

A. Fatty infiltration
B. Steatosis
C. Xanthaloma

Ans. A > B

Also know:

Q. Pathological steatosis is defined as involving more than % of hepatocytes?

Ans. 5%

Q96. A Patient with family history of bleeding now having bleeding raised level of APTT and BT Diagnose most likely is:

A- VWD
B- Hemophilia A
C- DIC
D- Sepsis
E- ITO

Ans: A

Explanation:

Hemophilia: Raised APTT
ITP: Raised BT
VWD: Raised BT and APTT
DIC: Raised PT, APTT, BT &FDP

Q97. vWF disease scenario. BT and APTT are both deranged. Where is the main defect?

A. Platelet adhesion
B. Platelet aggregation

Ans. A (It is very easy to confuse between both options, memorize this well)

Also know

- ✓ Factor V mutation (Laden) leads to – Thrombosis
- ✓ Factor V deficiency leads – Bleeding
- ✓ Factor 12 deficiency leads – Thrombosis.
- ✓ Most common acquired thrombotic disorder is – Anti-phospholipid syndrome
- ✓ Most common Inherited coagulopathy – VWBD

- ✓ Most common inherited Thrombotic disorder is – Factor V Mutation (Laden)
- ✓ First step in thrombin formation = Endothelial injury
- ✓ First step in thrombus formation = Deposition of platelet on endothelium
- ✓ How vWF plays a role in hemostasis = By platelet adhesion to collagen

Q98. A 25 years old lady had Metallic Mitral Valve replacement 2 weeks after she was sent home on routine medications. She reported to causality with two hours history of severe epistaxis. She looked pale, rest of clinical examination was unremarkable. Investigation hb 6.5%, TLC 7500/cumm, platelets75000/cumm, pt 5, inr 5.5. the most likely cause of her bleeding is:

A. Drug Induced
B. Idiopathic
C. Infection
D. Thrombocytopenia
E. Trauma

Ans. A

Q99. 52 years man with lytic lesions in bone, back pain and weakness. Apple green birefringence & congo stain positive. Which is most suitable investigation to reach diagnose is:

A- Immunoelectrophoresis
B- Protein electrophoresis
C- Hb electrophoresis
D- Benze Jones Proteins
E- ELISA

Ans: B

Explanation:

Multiple myeloma shows green birefringence when stained with congo red stain and diagnosed by Protein Electrophoresis.

Also know: Lambda chain in urine is seen in multiple myeloma

Q100. 40-year-old man with back pain, apple green birefringence & congo stain positive on damage to kidney with monoclonal antibody present He is most likely suffering from?

A- SLE
B- Multiple Myeloma
C- RA
D- Scleroderma

Ans: B

Q101. ALL diagnosis:

Ans. 20% blast cells in BM (PAS block and TdT positivity)

Also remember: 90% blast cells AML (seen by sudan black stain)

Q102. Female with raised RBC mass, erythropoietin also raised cause:

A. Sec polycythemia
B. Primary polycythemia

Ans. A

Remember:

Primary polycythemia: Disorder of increase RBCs, usually due to acquired JAK2 mutation.

May present as intense itching after shower (aquagenic pruritus)

Decrease EPO in primary polycythemia

Increase EPO in Secondary polycythemia (Absolute Polycythemia)

Increase RBC elements

Q103. Which one decreases the muscle length?

A. Golgi tendon organ
B. Muscle spindle
C. Tubulin
D. Myosin

Ans. B

(**Note:** the following concepts are high yield).

Golgi tendon organs:

Golgi "T"endon organ are stimulated by ↑muscle "T"ension (force), i.e, by muscle contraction (↓muscle length).

- When stimulated, golgi tendon organs relaxes the muscle (to decrease muscle tension)

Muscle spindles:

- Muscle "S"pindles are stimulated by ↑muscle "S"tretch (↑muscle length).
- When stimulated, muscle spindles decrease muscle stretch/length.

Q104. Posture maintenance by muscle spindle is done by:

A- Increase in muscle spindle length
B- Muscle stretch by alpha motor neurons
C- Muscle stretch by gamma motor neurons
D- Progressive lengthening and shortening of muscle fibre

Ans: D

Q105. A young female came with suddeon onset of severe pain, swelling in left

ankle joint. He is febrile and his TLC is 12000/C ESR 50MM/HR urine DRE showed few RBCs urea was 40mg/dl and serum uric acid was 601. The diagnostic test in this case would be:

A. Athroscopy
B. RA factor
C. Synovial fluid aspirate for polarized light/MSU crystals
D. Synovial fluid for C/S
E. X-ray ankle joint

Ans. C

This question also came in November 2022 exam, but option C was not given and "serum uric acid" was given instead, go for that.

Q106. A lady presents with recurrent abortion in gynae OPD which Antibody should be tested for her condition?

A- Anti SSA
B- Anticardiolipin antibody
C- Anti SSB
D- ANA
E- Anti Smith

Ans: B

Explanation:

Antiphospholipid syndrome causes recurrent abortion characterized by following three antibodies.
1-Lupus anticoagulant
2-Anticardiolipin antibody
3-Anti Beta 2 Glycoproteins-l antibody

Stage	GFR (ml/min/1.73m^2)	Terms
1	≥90	Normal or high
2	60-89	Mildly decreased
3a	45-59	Mildly to moderately decreased
3b	30-44	Moderately to severed decreased
4	15-29	Severely decreased
5	<15	Kidney failure

Q107. Creatinine clearance in mild renal failure?

a) 60-80%
b) 40-60 %

Ans. A

Q108. Pt. presented with complains of hemoptysis, hematuria for 2 days, renal biopsy showed extra capillary glomerulonephritis with linear deposit of IgG. What is the cause?

A. Good pasture syndrome
B. IgA nephropathy

Ans. A

Q109. Clara cells are present in which of following?

A- Terminal bronchioles
B- Bronchi
C- Larynx
D- Trachea

Ans: B

Explanation:

Clara cells present in – Terminal bronchioles
Goblet cells present in – Bronchi or tertiary bronchus

Q110. Cimetidine is:

A. Anti-estrogenic
B. Enzyme inducer
C. Enzyme inhibitor

Ans. C. (It increases estrogen, so is not anti-estrogenic)

But if asked:

Q. Which side effect of cimetidine causes it to be stopped?
A- Gynecomastia
B- CNS toxicity
C- Hepatic enzyme inhibition

Ans. A

Q111. A patient has anterograde amnesia for 6 months. He can remember all past life events. Short term memory loss occurs due to lesion of?

A- Hippocampus
B- Parahippocampal
C- Neocortex
D- Frontal lobe

Ans: A

Q112. A lady with CRF patient, sample taken which was placed in refrigerator overnight, next day, normal sodium, raised K (6.3) Raised PO4 and LDH (600) what is the cause?

A- End stage renal failure
B- Hemolysis of Blood sample
C- Hemolysis of Tissue
D- Renal CA
E- Drug Intoxication

Ans: B

Q113. ESR more than 100 is seen in:
A- RA
B- OA
C- Multiple Myeloma
D- SLE
E- Sjogren
Ans: C

Q114. Erection occurs due to which of following?
A- Pudenal nerve
B- Sympathetic
C- Parasympathetic
D- Obturator nerve
Ans: C
Explanation:
Over all ejaculation – Pudendal nerve >Sympathetic
Ejaculation two parts
Emission – Sympathetic
Ejection – Pudendal
Erection – Parasympathetic

Q115. Spore killing is via:
A. Moist heat at 121C for 15 minutes and 15 psi pressure
B. Moist heat at 131C for 15 minutes and 15 psi pressure
C. Dry heat at 121C for 15 minutes and 15 psi pressure
D. Dry heat at 131C for 15 minutes and 15 psi pressure
Ans. A
(Remember: If this is not in options then choose "dry heat for 2 hours at 160C")

Q116. Chi square chart used for which of following?
A- Nominal Data
B- Categorical data
C- Ordinal data
D- Mean of two
Ans: B
Explanation:
T Test – Mean of 2 groups
Anova Test – Mean of 3 or more groups
Chi Square – 2 by 2 Table and Categorical Data
Pie Chart – Related to Percentages

Q117. PG was advised to take splenic biopsy sample Surgeon advised him to be careful not to injure the costodiaphragmatic recess this potential space lies at which level?
A- 10th rib at midaxillary level
B- 11th rib at mid axillary level
C- 12th rib at midaxillary level
D- 11th rib at mid clavicular level
E- 10th rib at midclavicular level
Ans: A

Q118. A patient present with lid lag, bulging eyes, opthalmoplegia and thyroid bruit. What investigation will you do?
A. TFT
B. ECG
C. Tensilon test
D. US
E. FNAC
Ans. A

Q119. Most common cause of gas gangrene lower limb:
A. Clostridium difficile
B. Clostridium botulinum
C. Clostridium welchi
D. Clostridium tetani
Ans. C (clostridium perfringens)
Also remember: DOC for gas gangrene – penicillin

Q120. A 35 years old female presents with 6 month Hx of fingers turning pale in cold (Raynaud's phenomenon) also having mild dyspnea with no wheeze, B/L pleural effusion, creatinine was high urea also raised, ANA positive. What is the diagnosis?
A- Discoid lupus erythematous
B- Progressive Systemic Sclerosis
C- SLE
D- Sjogren Syndrome
E- RA
Ans: B
Remember:
- ✓ Sjogren Association: RA
- ✓ dsDNA: SLE
- ✓ Anti-histone: drug-induced lupus
- ✓ Anti-centromeric: limited scleroderma
- ✓ Anti-Ro (SS-A): SLE, primary Sjogren (anti-Ro only= SLE)
- ✓ Anti-La (SS-B): SLE, primary Sjogren
- ✓ Anti-Sm: SLE
- ✓ Anti-RNP: SLE, MCTD
- ✓ Anti-Jo: polymyositis, dermatomyositis
- ✓ Anti-Scl70 (topoisomerase 1): diffuse scleroderma

Q121. 52-years-old man presented in opd with unusual facial expressions, half side of the face was red and absence of sweating what could be the possible cause for this condition:

A- Sympathetic Chain damage
B- Facial nerve damage
C- Parasympathetic damage
D- Vagus nerve damage
E- Accessory nerve damage

Ans: A

Explanation:

This is case of horners syndrome that presents due to damage of cervical sympathetic damage with ptosis, anhydrosis & constricted pupil (miosis).

Q122. Definitive diagnosis of pneumonia is by which of following?

A- Throat culture
B- Urine culture
C- Sputum culture
D- Gram staining
E- X-ray

Ans: C

Q123. Benedict test is for:

A- Glucose
B- Diabetes
C- Blood flow
D- Reducing the substance of urine
E- Increase Substance

Ans: D

Q124. Diabetic nephropathy is diagnosed by which of the following?

A- Increase urinary albumin
B- Increase serum albumin
C- Increase urinary nitrogen
D- Microalbuminuria
E- Increase urinary creatinine

Ans: D

Q125. A 7-year-old male child has hemolysis after taking primaquine. Which of the following drugs can also precipitate hemolysis in this disease?

A. Omeprazole
B. Metoclopromide
C. Ethambutol
D. Sulphonamide

Ans. D

Q126. In the aortic opening if Diaphragm is constricted which of the following structure will be compressed along with aorta?

A- Azygous veins and both phrenic nerve
B- Thoracic duct and vagus nerve
C- Azygous vein and vagus nerve
D- Inferior vena cava
E- Thoracic duct and azygous vein

Ans: E (Snell +KLM)

Explanation:

- ✓ Aortic opening (T12) – Aorta, thoracic duct and azygous vein.
- ✓ Esophagous opening (T10) – Esophagous, Right and left vagus, lymphatics.
- ✓ Caval opening (T8) – IVC and Right phrenic.

Q127. Portal of entry of meningococcal meningitis is via?

A. Fecooral
B. Blood
C. Materno fetal
D. Respiratory droplets

Ans. D

Q128. Coagulase negative rod, no visible area around vancomycin:

A. Actinomycetes
B. Listeria
C. Nocardia
D. Bacillus
E. Corynebacterium

Ans. A

Q129. A 44-year-old man with a stab wound was brought to the ER. A physician found that the patient was suffering from laceration of his right phrenic nerve. Which of the following conditions has likely occurred?

A. Loss of sensation in the upper 6 intercostal spaces
B. Difficulty in expiration
C. Loss of sensation in the fibrous pericardium and mediastinal pleura
D. Normal function of the diaphragm

Ans. C

Q130. A case of neoplasia with cells showing hyperchromasia, which test/marker to do to check origin of cells:

A. Vementin
B. Desmin
C. Cytokeratin
D. Cadherin
E. Integrin

Ans: C

Q131. Most common trisomy in down's syndrome:

A. 21
B. 22
C. 20
D. 18

Ans. A

Q132. Most important pre-requisite for transplantation is:

A- ABO compatibility
B- Donor matching
C- HLA compatibility
D- CBC
E- X-ray

Ans: C

Q133. MHC have which antigen = HLA

Q134. Blood stored in the blood bank is deficient in which of the following coagulation factors:

A. Factor II only
B. Factors II and VII
C. Factors V and VIII
D. Factors IX and X

Ans. C

Q. First factor to be lost from stored blood is:

A. Factor 7
B. 2,3 DPG
C. ATP

Ans. B (factor 7 after 14 days)

Q135. A girl with delayed wound healing weight loss, increase appetite, fasting glucose 180 random 250 Next investigations is:

A- Ketone bodies
B- Albumin
C- HbA1c
D- Thyroid hormone levels

Ans: C

Q136. Most abundant cells in gray matter of CNS are:

A- Microglia
B- Fibrous astrocytes
C- Oligodendrocytes
D- Protoplasmic astrocytes

Ans: D

Explanation:

✓ Oligodendrocytes and astrocytes are both glial cells.
✓ Most numerous glial cell overall is astrocytes
✓ Most numerous glial cells in white matter is oligodendrocytes.
✓ Most numerous astrocyte in white matter is fibrous astrocyte
✓ Most numerous astrocyte in gray matter is protoplasmic astrocyte

Q137. Excessive sweating cause which electrolyte imbalance?

A. Hyperkalemia
B. Hyponatremia

Ans. B

Q138. Surfactant:

A. Decreases compliance work
B. Decreases when alveolar size decreased
C. Has a low turnover rate?
D. Decrease compliance

Ans. A (Surfactant increases lungs compliance, and thus decreases the work performed by lung)

Q139. A man of 70kg has 60% body fluid his interstitial fluid is about:

A- 42L
B- 28L
C- 14L
D- 11L
E- 3L

Ans: D

Explanation:

✓ Total body fluid – 42L
✓ ICF – 28L
✓ ECF – 14L (Interstitial 10.5L and Plasma 3.5L)

Q140. Which of the following is protective against atheroma?

A. VLDL
B. HDL
C. LDL

Ans. B

Q141. A 78-year-old man presents to his primary care physician for abdominal pain. His abdominal pain is in the epigastrium and has been persistent. He has had episodes of night sweats and has unintentionally lost 10 pounds over the course of 3 weeks. On physical exam his left supraclavicular lymph nodes are enlarged. The primary source of the carcinoma is:

A. Colon
B. Stomach

C. Liver
D. Brain

Ans. B (virchow's node, left supraclavicular lymphadenopathy)

Q142. In a child of scaphocephaly with frontal and occipital bossing due to premature closure of which suture?

A- Sagittal
B- Parietal
C- Coronal
D- Occipital
E- Lambdoid

Ans: A

Q143. Ineffective erythropoiesis is seen in which of the following diseases?

a) Thalassemia major
b) Hereditary spherocytosis
c) Sickle cell disease

Ans. A

Q144. Most common artery blocked in MI:

A) Circumflex artery
B) Left diagonal artery
C) Anterior IV artery

Ans. C (LAD>RCA>LCX)

Q145. 2 by 2 table in bio stats shows:

A. T test
B. Chi square test
C. Anova

Ans. B

Q146. Thrombolytic act via:

A. Fibrin
B. Fibrinogen
C. Plasminogen

Ans. C

Q147. Drug absorption in GIT depend on:

A. Concentration gradient
B. Saturation
C. Lipid solubility
D. Ionic solvent

Ans. C

Q148. Between T4 and T5 disc herniation which spinal nerve will be affected?

A. T4
B. T5

Ans. B

Understand the concept:

Nerve passes between C5 and C6
C5
C6✓
Nerve passes between L4 and L5
L4✓
L5
Disc herniation between L4 and L5 affect which root
L4
L5✓

Explanation:

Cervical roots till C7 exit above the vertebrae of corresponding number and C8 exit below Seven cervical vertebrae
All thoracic and lumbar roots exit below the level of correspondent vertebrae
In Disc Herniation though L4 and L5 moves laterally as they move toward exit but symptoms usually occur due to L5 compression

Q149. X linked recessive disease occurs in male. Why?

A. Heterozygous x linked
B. Hemizygous x linked
C. Homozygous x linked
D. Homologous x linked

Ans. B

Q150. Immediate/fast effect in cold:

A. Piloerection
B. Shivering
C. Inc physical activity
D. Release of catecholamine

Ans. A

Q151. A white corrugated plaque on the lateral surface of tongue is seen that can't be scraped off. It has a shaggy appearance and histopathology shows koilocytes and Hyperkeratotic oral mucosa due to piling of keratotic squamous epithelium

A. Hairy Leukoplakia
B. Lichen Planus
C. Leukoderma

Ans. A

Remember: Important association of OHL with EBV and HIV

Q152. Left adrenal supply:

A) Greater thoracic splanchnic
B) Lesser thoracic
C) Least thoracic
D) Greater splanchnic

Ans. A

Q153. P wave is not related to QRS in:

A. RBBB
B. AV nodal delay

C. Fast firing of SA node
D. 3rd degree AV block

Ans. D

Q154. Factor 9 is not available which of the following can be given as alternative therapy?

A- FFP
B- Cryoprecipitate
C- Whole blood
D- Plasma
E- N/S

Ans: A

Explanation:

Cryoprecipitate has – Factor 8+13
FFP has – Factor 9

Q155. Which of the following cellular adaptation occurs in a patient with longstanding hypertension?

A. Atrophy
B. Hypertrophy
C. Hyperplasia
D. Metaplasia
E. Hemosiderosis

Ans. B

Q156. Why doesn't hyperaldosteronism cause edema?

Ans. Escape phenomenon

Explanation:

ANP causes down-regulation of epithelial sodium channels in collecting tubules (recall that aldosterone works by up-regulating epithelial sodium channels). So when there are less sodium channels in collecting tubules, less sodium will be reabsorbed and less fluid retains. This is known as aldosterone escape

Also know:

Q. Aldosterone escape phenomenon is seen in:

A. Cushing disease
B. De Quervain thyroiditis
C. Hashimato thyroiditis
D. Conns syndrome
E. Adrenal insufficiency

Ans. D

Q157. Maximum feedback gains in controlling blood pressure by?

A. RAAS
B. Baroreceptor
C. CNS ischemic response

Ans. A

Q158. Gain of feedback is:

a) Positive feedback
b) Negative feedback

Ans. B

Q159. What type of wave will be seen on EEG while giving viva or solving math problems?

A- Alpha waves
B- Theta waves
C- Beta waves
D- Delta waves

Ans: C (FA + Guyton + Ganong)

Explanation:

- ✓ If asked "a person was angry and under stress after an argument with his boss which brain waves will be seen" then choose "theta waves"
- ✓ Awake and open eyes
- ✓ Awake and Eye Close: Alpha Wave
- ✓ Awake and Eye open: Beta Wave
- ✓ N1: Theta Wave (4-7Hz)
- ✓ N2: Sleep spindles (12-14Hz) and K complexes (High Voltage biphasic waves)
- ✓ N3&4: Delta Wave (0.5-4Hz) – Low Frequency and High Voltage Wave
- ✓ Theta wave may occur during Stress, N 2 &3 but Predominantly in N1
- ✓ Delta Wave occur during Deep sleep, Infancy and Organic Brain Disease
- ✓ Spindle may Occur During N1 but Predominantly in N2

Q160. Which of the following organisms causes necrotizing fasciitis?

A. Clostridium botulinum
B. Clostridium perfringens
C. Clostridium difficile

Ans. B

Q161. True regarding pneumococcus:

A. Forms long chains
B. Gram neg
C. Enapsulated

Ans. C>A

Q162. Virulence factor for streptococcus pneumonia is:

A. Streotolysin
B. Pneumolysin
C. Capsule

Ans. C > B

Remember:

Virulence: Capsule > Pneumolysin
Pneumolysin: Alpha hemolysis

Streptolysin: Beta hemolysis

Q163. Purkinje cells are:

Ans. Modified cardiac myocytes

Q164. Patient was diagnosed with liver disease and ascities and ascitic tap need to be done. Needle passed in lower abdomen which artery should be avoided:

A- Superior epigastric artery
B- Inferior epigastric artery
C- Cremasteric artery
D- Celiac trunk
E- Aorta

Ans. B

Q165. Hyponatremia with increased ECF, the cause is:

A. Excessive water intake
B. CCF
C. CLD

Ans. B

Q166. Patient has ataxia when asked to walk, with close eyes, sways back and forth, where is the lesion present?

A- Dorsal column
B- Cerebellum
C- Basal ganglia
D- Cerebrum
E- Cortex

Ans: A

Explanation:

Fall on close eye – Dorsal column
Fall on open eye – Cerebellum

Q167. Clasp knife spasticity is seen in lesions of?

Ans. Corticospinal tract

Q. Lesion in pyramidal tract best described clinically?

A. Clasp knife rigidity
B. Clasp knife spasticity

Ans. A

Q. Lesion of extra pyramidal tract will show:

A. Clasp knife rigidity
B. Clasp knife spasticity

Ans. B

Q168. Iggo cells collection dome:

A. Merkel
B. Meissner

Ans. A

Q169. Frank starling theory, force of contraction depends upon:

A. Change in length of ventricular muscle fiber
B. Increase calcium influx
C. Increase force of contraction

Ans. A

Q170. Moderator band located in which of following?

A- Right atrium
B- Left ventricle
C- Right Ventricle
D- Left atrium
E- Trabeculae

Ans: C

Q171. How much water reabsorbed at PCT?

Ans. 67%

Q172. Basement membrane negative charge is:

A. Proteoglycan
B. Peptidoglycan
C. Laminin
D. Phosphatidylcholine

Ans. A

Heparan sulphate>> Proteoglycan >>> Laminin
(Heparan was not in the options)

Q173. 42 y/o pregnant female trisomy 21 was diagnosed on amniocentesis she is willing to keep the pregnancy; what abnormality the child might have?

A. Fragile X
B. Cru di chat syndrome
C. Acute lymphoblastic leukemia

Ans. C

Q174. Purkinje fibers have fastest speed of conduction because:

A. Low refractory period
B. Scanty gap junctions
C. Less myofibrils
D. Narrow diameter of fibers
E. Large no of NA channels

Ans. E

Purkinje Fibers have highest speed of conduction due to

Wide diameter > large no of gap junctions > Large no of sodium Channel >Less no of myofibril > Short refractory period

Q175. A female having postpartum hemorrhage during delivery of twins after that she can't lactate her babes

even her desire to lactate, she also complain that she remain 6 months lethargic after delivery where is problem that she can't lactate?

A- Pituitary adenoma
B- Sheehan syndrome
C- Sherman syndrome
D- Prolacinoma

Ans: B

Q176. A question was given about "why is there low BP in cardiogenic shock" but options were not recalled. In cardiogenic shock the heart is unable to pump enough blood to meet the needs of the body, due to some issue with the heart e.g. MI

Q177. Mainstay of prevention of nosocomial infection:

A- Wear gloves
B- Use extensive hand washing after examining every patient
C- Sterilize used instruments
D- Wear mask

Ans: B

Q177. How are cystoscopies and endoscopes sterilized?

A. Isopropyl alcohol
B. Autoclaving
C. Tyndilization
D. Chlorhexidine

Ans. C

Q178. Regarding fat embolism, all true except:

A. Take place with damage to fat tissue only
B. Trauma to the breast
C. Trauma to pancreatic tissue
D. 10% fatal

Ans. A

It has also been asked as

Q. Regarding fat embolism

A. 80%fatal
B. Presents after 12 hours
C. Breast trauma is most common cause

Ans. B

Q179. Lesion at right optic tract result in:

A- Blindness
B- Left homonymous hemianopia
C- Right homonymous hemianopia
D- Heteronymous hemianopia

Ans: B

Explanation:

- ✓ Middle optic chiasma lesion – Bitemporal heteronymous hemianopia.
- ✓ Optic track lesion – Homonymous hemianopia
- ✓ Right optic track lesion – Left homonymous hemianopia
- ✓ Pituitary tumor with homonymous hemianopia – Optic track lesion
- ✓ Pituitary tumor with heteronymous hemianopia – Optic chiasma lesion
- ✓ Right optic track lesion causes – Right temporal and left nasal fibers loss
- ✓ Right optic track lesion causes –Right nasal and left temporal vision loss
- ✓ Right optic track is made up of – Right temporal fibers (which see nasal vision) and left nasal fibers (which see temporal vision) so fibers loss and vision loss are separate things.
- ✓ Patient is blind on testing but have no insight of vision loss – Cortical blindness
- ✓ Cortical blindness due to blockage in – PCA

Q180. A woman with the history of trauma to head and neck region having lesion on tongue on protrusion of tongue deviated to the left side the nerve most likely involve is head and neck:

A- Left hypoglossal
B- Right hypoglossal
C- Glysopharangeal nerve
D- Vagus nerve
E- PICA

Ans: A (FA)

Explanation:

- ✓ CN V motor lesion – Jaw deviates toward side of lesion
- ✓ CN X lesion – Uvula deviates away from side of lesion
- ✓ CN XI lesion – Weakness turning head to contralateral side of lesion (SCM) Shoulder droop on side of lesion (trapezius)
- ✓ CN XII lesion – LMN lesion. Tongue deviates toward side of lesion

Q181. Most important thing in doctor – patient relationship is:

A- Confidence
B- Mutual Trust
C- Clarity
D- Mutual Respect

Ans: B

Q182. Health model to predict compliance OR The most important predictor assesses compliance therapy of patient:

A- Doctors perception of the disease
B- Patients own perception of a severity of disease
C- Patients perception of his role in community
D- Patient role in community

Ans: B

Q183. Which is multifactorial disease?

Ans. DM

Q184. The causative agent behind oral thrush is:

Ans. Candida albicans

Q185. Tumor marker of ALL:

A. CD10
B. CD3
C. CD5
D. CD19
E. CD4

Ans. A

Q186. An o blood group mother has baby with AB she and her partner are very worried that their baby has been changed in nursery. Which test will confirm the result?

A. Bombay phenotype
B. Lab mistake
C. Maternal antibodies
D. Lyon hypothesis

Ans. A

Q187. In myocardial infarction the type of necrosis seen will be:

A. Liquefactive necrosis
B. Caseous necrosis
C. Coagulative necrosis

Ans. C

Q189. Chorionic villus sampling done at which week?

A- 11 week
B- 15 week
C- 19 week
D- 20 week

Ans: A (Ten teacher)

Explanation:

CVS at – 11 week and 2% risk of miscarriage.
Amniocentesis at – 15 week and 1% risk of miscarriage.
Cordocentesis at – 20 weeks and 2-5% risk of miscarriage.

Q190. A person working in digging deep earth crust is prone to have?

A. Silicosis
B. Coal workers disease
C. Anthracosis
D. Asbestosis

Ans. A

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PATHOLOGY

JUNE – 2021

Q. Germ cells are derived from:

A. Ectoderm
B. Endoderm
C. Mesoderm
D. Notochord

Ans: A

It can also be asked with different options like this.

Q. Primordial germ cells are derived from:

A. Yolk sac endoderm.
B. Yolk sac mesoderm
C. Yolk sac ectoderm
D. Allontois

Ans: A

Q. Liquefactive necrosis is seen in:

A) Acute appendicitis
B. Acute pancreatitis
C) Ischemia of brain
D) MI

Ans: C

Q. Microscopic diagnostic feature of TB lesion is?

a. Caseous necrosis
b. Epithelioid cells
C. Langerhans cells
d. AFB

Ans: A

Q. In wound healing which collagen is used to provide the final tensile strength?

A- Type 1
B- Type 2

C- Type 3
D- Type 4
E- Type 5
Ans: A
Explanation:
Early wound healing + granulation tissue – Type 3 collagen
Late wound healing + wound strength – Type 1 collagen

Q. 90-year-old female, lipofuscin pigment present in histology report of cardiac muscle.it indicates.
A. Cellular oxidation
B. Coagulation necrosis
C. Autophagy
D. Apoptosis
E. Atrophy
Ans. C

Q. A Female patient presented with breast mass of regular margins non tender and mobile suitable diagnose is:
A- Phylloid tumor
B- Intraductal carcinoma
C- Paget disease
D- Fibroadenoma
E- Lobular carcinoma
Ans: D

Q. A young boy has distorted nose and cervical lymphadenopathy. Lymph node show non ceseating granuloma and sputum AFB is positive. Diagnosis is:
A) TB
B) Leprosy
C) Sarcoidosis
D) Syphilus
Ans: B

Q. 12 years old Afghan boy came with fever night sweats on right side neck discharging sinus and cervical lymphadenopathy. No growth revealed on blood culture which next confirmatory test should be done?
A- ZN staining
B- Lymph node biopsy
C- Mycobacterium culture
D- Mycobacterium antibody
E- Blood culture
Ans: B

Q. Deficiency in which of following cause hyperexcitibility:
A- Na
B- K
C- Ca
D- PO_4
Ans: C
Explanation:
Hypokalemia – Decrease nerve excitability in RMP
Hyperkalemia – Increase nerve excitability in RMP
Hyponatremia – Decrease height of action potential
Hypernatremia – Increase height of action potential
Hypocalcaemia – Increase excitability
Hypercalcemia – Decrease excitability

Q. 2nd heart sound is due to:
A- Rapid ejection
B- Rapid filling
C- Isovolumetric relaxation
D- Isovolumetric contraction
E- Slow Ejection
Ans: C
Explanation:
First heart sound – Isovolumetric contraction (Closure of mitral and tricuspid valve)
Second heart sound – Isovolumetric relaxation (Closure of aortic and pulmonary valve)
Third heart sound – Rapid ventricular filling (Normal in children pregnancy and athletes)

Q. Ventricular rate slower than atrial rate 2nd degree heart block. Fibrin stabilized by?
A. Factor 13
B. Factor 12
C. Platelet plug
Ans: A

Q. Heparin is released by:
A- Neutrophils
B- Mast cells
C- Macrophages
D- Basophils
E- Plasma cells
Ans: B

Q. Klinfilter karyotype is:
A- 45XX
B- 47XXY
C- 46XX
D- 46XY
Ans: B

Q. HCC caused by:
A- Aronatoc amines
B- Hydrocarbon
C- Aflatoxin
D- Benzidine
Ans: C

Q. A patient having alternative diarrhea and constipation habits and per rectal bleeding diagnosed as a case of colon cancer which is the tumor marker?
A- Alpha fetoprotein
B- CEA
C- CA-125
D- BRCA -2
E- CA 19-9
Ans: B

Q. HCC tumor marker:
A. Cea
B. Afp
Ans: b

Also know:

Q. Suspicion of HCC best investigation to diagnose:
A. CT SCAN
B. Liver biopsy
C. AFP
Ans: B

Q. Most lethal premalignant condition of oral cavity?
A. Lichen planus
B. Erythroplakia
Ans: ?

Explanation:
Most Common Pre-malignant lesion – **Leukoplakia**
Most lethal pre-malignant lesion – **Erythroplakia**
Most common pre-malignant condition – **Submucosal fibrosis**
Most lethal pre-malignant condition – **Lichen planus**

Q. Concomitant hyperplasia and hypertrophy can be seen in:
A- Breast development in puberty
B- Uterine changes in pregnancy
C- Endometrial Hyperplasia
D- Exercising Muscles
Ans: B

Explanation:
Hyperplasia of uterine blood vessels and hypertrophy of uterine smooth muscles.

Q. Grading of a tumor shows:
A- Extent of spread
B- Degree of differentiation
C- Increased N/C ratio
D- Pleomorphism
Ans: B

Explanation:
Grading – Nuclear differentiation / degree of differentiation / Mitosis
Staging – Extent of spread / Lymph nodes involvement

Q. FSH is inhibited by inhibin, which is secreted by?
A- Sertoli cells
B- Leydig cells
C- Granulosa cells
D- Mullirian cells
E- Theca cells
Ans: A

Q. Partial motility of sperm begins in:
A- Seminefrous tubules
B- Rete testis
C- Epididymis
Ans: C

Q. Gene related to medullary CA of thyroid:
A. BRCA
B. APC
C. RET
Ans. C

Q. Secondary center of bones ossification in:
A) Epiphysis
B) Epiphyseal plate
C) Diaphysis
D) All of the above
Ans: A

Q. If mother is Rh negative and father is homozygous Rh positive, which of the following is true:
A: All Rh positive children
B: All Rh negative children
C: 25% offspring will be Rh negative
D: All homozygous positive
E: 50% Rh positive 50% Rh-ve
Ans: A

Q. Hypersensitivity reaction after blood transfusion?
A. Type1
B. Type 2

C. Type 3
D. Type 4
Ans: B
If during blood transfusion – Type 1

Q. Myasthenia gravis has following type of hypersensitivity:
A. Type 1
B. Type 2
C. Type 3
D. Type 4
Ans: B

Q. Most important prerequisite for renal transplant:
A. HLA testing
B. ABO compatibility
C. T cell count
Ans. A
Remember:
Important test for transplant – HLA typing
Best blood cell for HLA sampling– WBC
Best site for HLA sampling – Bucal mucosa
Best tissue for HLA sampling – Bone marrow

Q. 55years old male with past history of epigastric pain for which he was taking antacids was diagnosed as MALT lymphoma what is the most likely cause?
A- Drug induced gastritis
B- Ulcers
C- Intestinal metaplasia
D- Atopic gastritis
E- H. Pylori
Ans: E

Q. Philadelphia chromosome is associated with?
A- CML
B- AML
C- ALL
D- CLL
Ans: A

Q. Burkett lymphoma oncogenes are by EBV:
A- Proto-oncogene c-myc amplification
B- Proto-oncogene c-myc translocation
C- Ras proto-oncogene
D- BCL2 proto-oncogene
Ans: B

Q. A player hiked to mountain, having Low PO_2 and developed dyspnea the likely etiology is:
A- Anemic hypoxia
B- Hypoxic hypoxia
C- Decrease Erythropoietin
D- Stagnant Hypoxia
E- Decrease Perfusion
Ans: B
Explanation:
Hypoxic Hypoxia (Decrease O_2 tension)
High altitude
V/Q mismatch
Anemic Hypoxia (Decrease O_2 Carrying)
Anemia
CO Poisoning
Stagnant Hypoxia (Low Perfusion)
Heart failure
Shock
Histotoxic Hypoxia (Not Able to use O_2)
Cyanide poison

Q. A patient has following ABGs PH of 7.2, HCO_3 levels of 19 and PCO_2 of 39 what is likely diagnose is?
A- Metabolic alkalosis
B- Respiratory acidosis
C- Metabolic alkalosis
D- Metabolic acidosis
E- Normal
Ans: D

Q. Dead space remained unchanged in:
A- Asthma
B- Deep breathing
C- Bronchoconstriction
D- Bronchiectasis
E- Shallow breathing
Ans: E (E>B)
Explanation:
Pattern of breathing has no effect on dead space but Here E>B.

Q. An old women presented with jaundice and biliary colic, diagnosis of cholelithiasis was made. Synthesis of which of the following enzyme is likely to be increased?
A. AST
B. ALP
C. ALT
D. GGT
E. LDH
Ans: B
Pregnant woman – GGT

Q. Pregnant lady near term raised ALT and AST, recent history of travel to remote area the causing agent is which of following?

A- Hepatitis A
B- Hepatitis B
C- Hepatitis D
D- Hepatitis C
E- Hepatitis E

Ans: E

Explanation:

Orofecal route – Hep. A >Hep. E
Most lethal Hepatitis – Hep. D
Most common in pregnancy – Hep. A
Most lethal/Remote Area in pregnancy – Hep. E

Q. An adult in sitting position, resonance can be auscultated from back of the chest till:

A- 6th RIB
B- 8th
C- 10th
D- 11th
E- 12th

Ans: C

Explanation:

Midclavicular line 6th RIB
Mid axillary line 8th RIB
Back 10th RIB

Q. Inferior angle of scapula is at what level of ri:

A. 5th
B. 5th
C. 7th
D. 8th

Ans: C

Q. Greater splanchnic nerve synapsis in:

A. Coeliac ganglion
B. Superior mesenteric ganglion
C. Lower splanchnic ganglion in sympathetic trunk

Ans: A

Q. Greater splanchnic is part of:

A. Sympathetic system
B. Parasympathetic system

Ans: A

Q. In appendicitis pain around the umbilicus pass thorough:

A- Sensory through T10
B- Sympathetic nerve at T10
C- Parasympathetic
D- Ilioinguinal nerve

Ans: B

Q. Renal pyramids are present in:

A. Renal cortex
B. Renal Medulla

Ans: A

Q. Medial part of Frontal and partial lobe blood supply is?

A) ACA
B) MCA
C) PCA

Ans: A

Q. MCA supply area:

A. Occipital lobe
B. Insula cortex
C. Frontal cortex

Ans: b

ACA:

Medial part of frontal and parietal lobes
Corpus callosum

MCA:

Lateral part of frontal and parietal lobe
Temporal lobe

PCA:

Occipital lobe
Motor Areas (Primary and Secondary): ACA
Somatosensory Areas (Primary and Secondary): MCA

- ✓ Insular Cortex: MCA
- ✓ Broca's Area: MCA
- ✓ Wernicke's Area: MCA
- ✓ Auditory Area: MCA
- ✓ Anterior Temporal Lobe: MCA
- ✓ Superior Temporal Gyrus: MCA
- ✓ Middle Temporal Gyrus: MCA & PCA
- ✓ Inferior Temporal Gyrus: PCA
- ✓ Primary and Secondary Visual Cortex: PCA

Q. Long term memory involves:

A- Protein synthesis gene activation
B- Synaptic facilitation
C- Synaptic inhibition

Ans: A

Q. Loss of long term memory occurs due to:

A. Limbic
B. Prefrontal Cortex
C. Hippocampus
D. Cingulate gyrus
E. Amygdala

Ans: A

Q. What will happen due to UMNL?

A- Flaccidity
B- Babinski sign diminished
C- Planters upward
D- Exaggerated reflexes/Inc tendon jerk
E- Atrophy

Ans: D

Q. A Patient presented with Cough, coryza, conjunctivitis and koplik spots. Most like organisnm responsible for this clinical presentation is of which among these?

A- Paramyxo Virus
B- Picarna
C- Polyoma virus
D- Orthomyovirus
E- Adeno

Ans: A (Measles)

Explanation:

Paramyxo Viruses
Measles
Parainfluenza
Mumpss
RSV

Orthomyxo Virus
Influenza Virus

Q. Carrier status for staph aureus is checked by taking sample from:

A. Pharynx
B. Hands
C. Finger Webs
D. Anterior nares

Ans: D

Q. Boy had fever palpitations and sore throat. O/E there is edematous tonsil with yellow colored abscess organism involved:

A. Group B strep
B. S. Aureus

Ans: B

Strep pyogenes (group A strep) > S aureus > H influenza

Q. A group with CHD and another group with No associated disease what type of study is this?

A- Cohort
B- Cross sectional
C- Correlation
D- Retrospective
E- Case control

Ans: E

Explanation:

Case control study
Disease vs Non Disease
Related to ODD Ratio

Cohort study
Group with risk factors and group without risk factors
Related to relative risk
Cause to effect
Forward study

Cross sectional study
Disease and risk factors

Q. Good doctor patient relationship requires:

A- Having sound medical knowledge
B- Updating skills
C- Show authority
D- Active listening

Ans: D

Q. Mechanism of rigor Mortis:

A- Anaerobic glycolysis
B- Gluconeogenesis
C- ATP depletion
D- Glycogenolysis

Ans: C (After death no oxygen → No ATP → Calcium ions diffuses into the cells → Calcium binds with Troponin → Cross bridges between actin and myosin).

Q. Interstitial fluid contains:

A- 14L
B- 11L
C- 42L
D- 28L

Ans: B

Explanation:

Total body fluid – 42L
ICF – 28L
ECF – 14L (Interstitial 11L and Plasma 3L)

Q. Mechanism of action neutrophil killing by producing oxygen radicals:

A) NADPH
B) Oxidase
C) Elastase
D) Hydrase

Ans: A

Q. Neutrophil collected from blood are analyzed for burst of oxygen consumption from which of following

even in acute inflammatory response to respiratory burst is essential:

A. Phagocytosis of bacteria
B. Microbial killing

Ans: B

Also know:

Q. Strong microbicidal killer?

A. Hydrogen peroxide
B. Superoxide

Ans: A

HO > H^2O^2 > Superoxide

Q. Inhibition of GNRH during lactation is through:

A- Estrogen
B- Progesteron
C- Prolactin
D- Inhibin

Ans: C

Q. About skeletal muscles:

A) Multiple peripheral nuclei
B) Increase intracellular calcium

Ans: A

Q. Structure parallel and posterior to carotid sheath:

A- Sympathetic trunk
B- Internal jugular vein
C- Internal carotid artery
D- External jugular vein

Ans: A

Q. Which of the following colonic polyps is not premalignant?

a) Juvenile polyps
b) Hamartomatous polyps associated with Peutz-Jegher's syndrome
c) Villous adenoma
d) Tubular adenomas

Ans: A

Q. Juvenile polyp is:

A- Hyperplastic
B- Adenomatous
C- Hamartomatous
D- Neoplastic
E- Peutz jegher

Ans: C

Q. Child had fever Sore throat took antibiotic for 3 weeks later develop generalized edema haematuria likely diagnose is:

A- RPGN
B- Membranous nephritis
C- PSGN
D- FSGN
E- IgA nephropathy

Ans: C

Sub-endothelial deposits – SLE, diffuse proliferated GN, Membrane proliferated GN
Sub Epithelial deposits – PSGN
Intramembranous Deposits – Diffuse Proliferated GN, Membrane Proliferated GN type 2
Focal segmental Glomerulonephritis – **Massive Proteinuria**

Q. A study conducted to on rates on antibiotics of same effect produced by different pharmaceutical company and rate of different drugs are 1.4 1.7 2.0 3.5 8.4 etc which measure of central tendency will be used?

A- Weighted mean
B- Mean
C- Mode
D- Median

Ans: A

Q. Post ganglionic sympathetic release:

A- Acetylcholine
B- Epinephrine
C- Norepinephrine
D- GABA
E- Histamine

Ans: C

Q. End arteries present in:

A- Central retinal artery
B- Heart
C- Spleen
D- Liver

Ans: A

Explanation:

Overall – Central retinal artery > Spleen > Heart
True End artery /Anatomical – Retinal artery
Functionl end Artery – Heart

Q. Mechanism of action of cabergoline:

A- D1 agonist
B- D2 agonist
C- D3 agonist
D- D4 agonist

Ans: B

Q. Which of the following comprises the largest portion of the sternocostal surface of the heart seen on radiogragh?

A. Left atrium.
B. Left ventricle
C. Right atrium.
D. Right ventricle
Ans: D

Q. In quite respiration the muscle which increases the transverse and anteroposterior diameter of thorax is:
a) Diaphragm
b) External intercostal
c) Innermost intercostal
d) Internal intercostal
Ans: B

Explanation: Yes, in quite respiration diaphragm used but AP and transverse diameter increase by external Intercostal so B here.

Q. A drug has half life 10hrs.. Drug will achieve steady state in:
A) 40 hrs
B) 60 hrs
C) 30 hrs
D) 120
Ans: A

Q. Palatine tonsil drains by:
A- Phyrengeal
B- Reterophyregeal
C- Juglodigastric
D- Omohyoid
Ans: C

Q. 30-year-old female patient with MCV less than 70, increased TIBC and low serum ferritin likely diagnose:
A- Iron deficiency anemia
B- Anemia of chronic disease
C- Sideroblastic anemia
D- Lead poisoning
Ans: A

Q. A patient after 1 year of gastrectomy has anemia fatigue and Raised MCV 110 he is also having peripheral numbness, decreased vibration sense and tingling sensation which type of anemia he is suffering from?
A- Pernious anemia
B- Iron deficiency anemia
C- Thalassemia
D- Anemia of chronic disease
E- Sideroblastic anemia
Ans: A (No option of Vitamin B12 deficiency or megaloblastic anemia if present prefer that)

Q. Vitamin B6 involved in:
A. Oxidation
B. Reduction
C. Carboxylation
D. Transamination
Ans: D

Q. Which vitamin deficiency causes homocystineuria?
A. B1
B. B2
C. B6
D. B12
E. Biotin
Ans: c

B6 homocystinuria
Homocystenemia b12

Q. A HIV patient develops lesion on skin his sex partner has similar lesions too which of following Skin CA associated with HIV?
A- Lymphoma
B- Kaposi sarcoma
C- Lymphogranuloma verenum
D- Burkitt lymphoma
Ans: B

Q. A 30 years man with sore throat & cervical lymphadenopathy; CBC picture shows presence of atypical lymphocytes the most important test in this setting is:
A- Monospot test
B- Mantoux test
C- Lymph node biopsy
D- Blood culture
E- X-ray
Ans: A

Explanation:
Sore throat with cervical lymphadenopathy and atypical lymphocytes indicating Infectious mononucleosis which is diagnose by Monospot test and Causative virus is EBV.

Q. Regarding newborn?
A. C shaped vertebral column
B. Thorax in cross section is oval
C. Upper limbs not fully developed
Ans: A

Q. Following help to investigate the pt wd Grave's disease:
A. T3 levels
B. T4 levels
C. TSH levels
D. TRH levels
E. TSH receptor antibodies
Ans: E

Q. A person working in summer having body temperature of 99'F collapses Due to excessive sweating, it is due to:
A- Heat stroke
B- Heat exhaustion
C- Cerebral concussion
D- None of the above
Ans: B
Explanation:
No Sweating + Collapse – Heat Stroke
Sweating + Collapse – Heat Exhaustion > Dehydration

Q. A female patient 45 years of age presented to you with orthostatic hypotension, depression, pigmentation of buccal mucosa. She has decreased neutrophils. Increased lymphocytes and eosinophils. ACTH level is increased., there is also hyperkalemia and hyponatremia. Diagnosis?
A. Cushing's syndrome
B. Cushing's disease
C. Ectopic ACTH
D. Addison's disease
Ans. D

Q. Decrease haptoglobin occur in:
A- Thalasema
B- Spherocytosis
C- Sickle cell disease
D- Cirhosis
E- Sideroblastic anemia
Ans: D
It is also decreased in G6PD deficiency

Q. Which branch of subclavian artery takes part in shoulder joint anastomosis?
A. Dorsal scapular artery
B. Suprascapular artery
C. Thyrocervical trunk
Ans: A
The left subclavian artery is the fifth branch of **the aorta** and the third branch from the arch of the aorta. The right subclavian artery arises from the brachiocephalic artery and its branches.

Q. A child had recurrent infections and every time klebsiella is found what is the diagnosis?
A- SCID
B- Bruton agammaglobulenemia
C- Common variable gamma globenemia
D- CGD
E- IgG deficiency
Ans: D (Robins)

Q. Factory worker motor peripheral neuropathy:
A. Lead
B. Zinc
C. Magnesium
Ans. A

Q. 19yr old boy presented to ER in unconscious state, his breath had fruity smell, temp 39, pulse 90, glucose 400, potassium 3.5, urea 10. Diagnosis
A. HONK
B. DKA
Ans. B

Q. Antibodies against acetylcholine receptor what is you diagnose?
A- Multiple sclerosis
B- Parkinson disease
C- Myasthenia gravis
D- Lambert eaten syndrome
Ans: C
Explanation:
Myasthenia gravis – Antibodies against postsynaptic voltage gated cannels cause damage to acetylcholine receptor
Diagnostic test – ACH receptor antibodies
Most accurate/confirmatory/gold standard – EMG
Initial drug for myasthenia gravis – neostigmine
DOC for maintained therapy – Pyridostigmine.
Physostigmine – Crosses BBB immediately and increase acetylcholine.
In lambert eaten syndrome – Antibodies are directed against calcium channels.

Q. Infectious mononucleosis involve cells which appear as Atypical cells are of what type of Cells?
A- Activated B cells

B- Plasma cells
C- NK cells
D- Activated T cells
E- Macrophages

Ans: D

Explanation:

IM shows Atypical Lymphocytes which include Activated T cells but infected Cells are B cell

Q. 45-year-old woman having weight loss with Increase T3 T4 Decrease TSH most likely diagnose is:

A- Primary Hypothyroidism
B- Primary Hyperthyroidism
C- Secondary Hyperthyroidism
D- Tertiary Hyperthyroidism
E- Primary Hyperparathyroidism

Ans: B

Q. Mainly associated with EBV:

A- Burkit lymphoma
B- Infectious mononucleosis
C- Hepatitis
D- Liver CA

Ans: A

Q. Sebaceous gland derived from:

A. Ectoderm
B. Endoderm
C. Mesoderm

Ans: A

Q. Superior parathyroid derived from:

A- 1st phyrangeeal pouch
B- 2nd pharyngeal pouch
C- 3rd pharyngeal pouch
D- 4th pharyngeal pouch

Ans: D

Explanation:

1st pouch derivative:
Middle Ear cavity
Mastoid air cell
Eustachian tube

2nd pouch derivative:
Palatine tonsile epithelial lining

3rd Pouch derivate:
Ventral Wing – Thymus
Dorsal Wing – Inferior Parathyroid

4th pouch derivative:
Ventral Wing – Ultimopharyngeal body, Parafollicular C cells of thyroid
Dorsal Wing – Superior Parathyroid

Q. Patient had bruise on elbow, which changed colour from yellow to brown. Pigment:

A. Lipofuscin
B. Hemosidrin

Ans. B

Remember:

Red Oxyhemoglobin 0 – 2 days
Blue Deoxyhemoglobin 2 – 5 days
Green Biliverdin 5 – 7 days
Yellow Bilirubin 7 – 10 days
Brown Hemosiderin 10 – 14 days

Q. Arrange the colour changes of contusion in chronocological order:

Red Oxyhemoglobin 0-2 days
Blue Deoxyhemoglobin 2-5 days
Green Biliverdin 5-7 days
Yellow Bilirubin 7-10 days
Brown Hemosiderin 10-14 days

Q. Gram positive coco bacillus tumbling motility causing diaherria in pregnant female:

A. Enterococcus
B. Haemophilus
C. Klabsiella
D. Listeria
E. Streptococcus

Ans: D

Treoponema pallidum remains highly susceptible to penicillin and has developed resistance to Azithromycin through A→ G mutation at position 2058 of the 23rRNA gene of T

Q. A 30-year-old woman with a bad obstetric history presents with fever. The blood culture from the patient grows gram—positive small to medium coccobacilli that are pleomorphic, occurring in short chains. Direct wet mount from the culture shows tumbling motility. The most likely organism is:

A. Listera monocytogenes
B. Corynebacterium sp.
C. Enterococcus sp.
D. Erysipelothrix rhusiopathiae

Ans: A

Q. Intestinal polyps with hyperpigmented spots in perioral area are seen in which autosomal dominant disease?

A. Kawasaki disease

B. Peutz Jegher's disease

Ans: B

Q. Stratified cuboidal epithelium is present in which of these?

A- Nasal cavity
B- Fallopian tube
C- Male urethra
D- Respiratory Bronchioles
E- Lining duct of Salivary gland

Ans: E (Only Suitable option)

Explanation:

Prefer this

Sweat gland – Stratified Cuboidal
Salivary gland – Stratified Columnar

Q. There is a bomb blast in the area which containing Strontium 90 what will be the complication?

A. Ewing sarcoma
B. Leukemia
C. Giant cell carcinoma
D. Osteosarcoma

Ans. D>B

Remember:

If just bomb blast/nuclear blast without mention of strontium 90 = leukemia
If just strontium 90 mentioned = osteosarcoma

Q. Some people recall this MCQ as Strotium-90 effects which organ?

Ans. Bone

Q. Radiation causes cancer in:

A) 5-10 years
B) >10 years

Ans: A

Q. Which of the following has a very small lumen with 3-4 muscle layers and adventitia and internal lamina?

A. Venule
B. Vein
C. Arteriole
D. Muscular artery

Ans: D

Q. Which of the following is called "good/healthy/useful cholesterol"?

A. LDL
B. VLDL
C. HDL
D. Chylomicrons

Ans. C

Q. Loss of rugal folds in fundus of stomach will result in:

Ans: Vitamin B12 deficiency

Also know:

Q. Enlarged rugal folds, increased acid seceration, multiple intractable peptic ulcer are characteristics of:

A. Menterier disease
B. Zollingner ellision syndrome
C. Chronic gastritis
D. Congenital diaphragmatic hernia
E. Barrett esophagus

Ans: B

Q. Which test is diagnostic for pernicious anemia?

A- Anti Parietal cell Antibodies
B- Anti Intrinsic factor Antibodies
C- Anti Smith Antibodies
D- Anti iliac Antibodies
E- Anti Gluten Antibodies

Ans: B

Q. Chronic diarrhea in 60-year-old man results in the following acid base imbalance:

a. Normal anion gap metabolic acidosis
b. Metabolic alkalosis
c. Increased anion gap metabolic acidosis
d. Respiratory acidosis

Ans. A

Q. Acute diarrhea causes which of the following:

A- Metabolic Alkalosis
B- Metabolic Acidosis
C- Mixed Acidosis
D- Respiratory Acidosis

Ans: B

Explanation:

Acute/Severe diarrhea leads to metabolic acidosis
Chronic diarrhea leads to metabolic alkalosis

Q. 15 yr old child with yellow discoloration of sclera, anorexia, vomiting and high colour urine most important test:

A- Alkaline phosphate
B- Bilirubin Plus ALT
C- AST
D- Anti HCV

Ans: B

Q. Receptors of thyroid hormone present on?

a. Cell membrane
b. Inside Cell membrane
c. Cytoplasm

d. Nuclear membrane
e. Inside nucleus
Ans: E

Q. The cells in medulla of the adrenal gland mediating the release of norepinephrine have which of these receptors?
A) Muscarinic
B) Nicotinic
C) Alpha 1
D) BETA 1
Ans: B

Q. A patient having Tachycardia abdominal distension and hypotension after laparotomy due to which of these?
A- Hypovolemic Shock
B- Septic Shock
C- Cardiogenic Shock
D- Anaphylactic Shock
E- Neurogenic Shock
Ans: A

Q. Azurophilic granules are specific distinguishing feature of:
Ans: AML

Also know:

Q. Azurophilic granules contain all of these enzymes, except:
A) Collagenase
B) Myeloperoxidase
C) Phospholipase A2
D) Elastase
Ans: A

Q. A 14-year-old present wd low grade fever anemia n easy fatigueabillity copmlplet blood picture shows blast cells wd scanty cytoplasm that r cd-19 +ve wat z probable diagnosis:
A. ALL
B. AML
C. CML
D. Hairy Cell Leukemia
Ans: A

Q. 78 years old lady purple patches over body but all labs were normal, only bleeding time was increased > 7 minutes. Which of the following could be the cause?
A. Senile purpura.
B. Scurvy
C. Hemophilia
D. Vwb
Ans. A

Q. An Old man who was being treated by a GP for infection with certain drugs comes to you with complaints of Generalized weakness, pallor, easy bruising. Hb 5g/dl and decrease RBC, WBC PLT. Retic count 0.1%. Bone tap hypocellular bone marrow with few cells diagnose is:
A- Aplastic anemia
B- Acute leukemia
C- Myelodysplastic
D- Megaloblastic anemia
Ans: A

Q. B cell markers used for their identification in a tumour:
A- CD 21
B- CD 23
C- CD 19 20
D- CD 15
Ans: C

Q. Congenital adrenal hyperplasia most common deficiency:
A. 17 alpha hydroxylase deficiency
B. 21 alpha hydroxylase deficiency
Ans. B

Q. 21 a hydroxylase deficiency is most common, and we confirm it by levels of 17 hydroxy progesterone levels which are raised. Metastatic calcification in kidney due to:
A. Hypoparathyroidism
B. Hyperparathyroidism
Ans: A

Also know:

Q. Metastatic calcification occurs most commonly in:
Ans: Kidney

Sensitized atopic allergy. First to interact with allergen – Mst cells

Q. In sensitized atopic asthma, antigen in bronchus first binds to:
A- Neutrophils
B- Mucosal mast cells
C- Macrophages
D- Basophils
E- Plasma cells
Ans: B

Q. A 16-year-old female presents with hypertension and increasing weight. Which of the following features would be most suggestive of cushing's syndrome rather than simple obesity?

A- Abdominal striae
B- Acanthosis nigricans
C- Buffalo hump
D- Pot belly
E- Amenorrhea

Ans: A (Prefer Proximal myopathy)

Q. How are cystoscopes and endoscopes sterilized?

A. Isopropyl alcohol
B. Autoclaving
C. Tyndilization
D. Chlorhexidine

Ans. C

Q. Hemoglobin binds with:

Ans: Haptoglobin

Iron $Fe2^{+}$ in reduced form binds to – **Hemoglobin**

Heme binds with – **Hemopexin**

Hemoglobin binds with – **Haptoglobin**

Q. Single breath nitrogen test is used to measure:

A- Physiological dead space
B- Residual volume
C- Anatomical dead space
D- Cardiac output

Ans: C

Q. Amoxicillin is given in combination with clavulanic acid because:

A- Activate Beta Lactamase
B- Inhibit Beta Lactmase
C- Decrease its effect
D- Better Absorption

Ans: B

Q. During surgery on a 56-year-old man for a squamous cell carcinoma of the neck, a surgeon notices profuse bleeding from the deep cervical artery. Which of the following arteries must be ligated immediately to stop bleeding?

A) Inferior thyroid artery
B) Transverse cervical artery
C) Thyrocervical trunk
D) Costocervical trunk
E) Ascending cervical artery

Ans: D

Antibiotic which when given rapidly release histamine and lower BP vancomycine (redman syndrome)

Q. Which of the following antibiotics release histamine and lower BP as a side effect?

A- Cimetidine
B- Cetirizine
C- Vancomycin
D- Sexamethonium

Ans: C (Redman syndrome)

Q. Most potent beta agonist in terms of bronchodilation:

A. Isoproterenol
B. Albuterol
C. Terbutaline

Ans: b

Q. Thirst is decreased by:

A- ADH
B- Aldosterone
C- Baroreceptor efferent
D- Interested hct

Ans: C

Q. The organ not affected in primary amyloidosis is:

A) Heart
B) Intestine
C) Kidney
D) Lung
E) Tongue

Ans: C

Q. Most of the sternocostal surface of heart is formed by:

A- Right atrium
B- Right ventricle
C- Left atrium
D- Left ventricle

Ans: B

Explanation:

Right border of Heart formed by – Right Atrium
Right border of Heart formed on X-ray by – SVC + Right Atrium
Base of heart is formed by – Left atrium
Left border of Heart formed by – Left Ventricle (Apex Beat)
Anterior (Sternocostal) Surface formed by – Right Ventricle
Inferior (Diaphragmatic) Surface formed by – Left Ventricle

Q. A patient having resting tremors he is having lesion in:
A- Midbrain
B- Cerebellum
C- Pons
D- Midbrain
E- Cortex
Ans: D
Explanation:
Intension tremors – Lesion of cerebellum
Resting tremos – Lesion of substansia nigra (midbrain) causes Parkinson disease

Q. Diphtheria affects which type of cell?
A- CD 4 Cells
B- CD 8 Cells
C- NK Cell
D- Plasma Cell
E- Neutrophil
Ans: B

Q. A patient having hypertension increase sodium level 155 and low potassium level 3 likely diagnose is:
A- Cushing Disease
B- Conn syndrome
C- Addison disease
D- Renal artery stenosis
E- Cushing syndrome
Ans: B

Q. A young girl with history of gum bleed and menorrhagia. Her peripheral blood smear shows large platelets and platelet count is 1,20000/L. What is the diagnosis?
A- TTP
B- ITP
C- Spurious thrombocytopenia
D- Bernard soulier syndrome
Ans: D
Explanation:
ITP – Vaccination + Large platlets + marked low platlets
Bernard – Large platlets + Normal or slight low platelets

Q. A 55-year-old man complains of thickened skin on his cheeks for months. It occasionally itches. While he has tried some topical over-the-counter steroids, he has not seen his dermatologist yet since the symptoms were mild. On physical exam, his legs are covered with multiple well-demarcated red papules and plaques with some telangiectasia. A skin biopsy is obtained. A week later, the biopsy comes back with Pautrier microabsecesses, atypical T cell lymphocytic infiltrate, and cells with cerebriform nuclei. Histopathology confirms CD 30+ cells and skin infiltration by neoplastic T lymphocytes. What is this disease?
A. Hodgkin's disease
B. Mycosis fungoides
C. Burkitt's lymphoma
D. ALL
E. Hairy cell leukemia
Ans. B
Remember:
Mycosis fungoides is an extranodal Non-Hodgkin's lymphoma of T cell origin with primary involvement of skin
Also called "sezary syndrome"
Atypical T cells (Sezary cells) in peripheral blood
Non healing oral ulcer can be scraped off

Q. Fenestrated capillaries in:
A: Skin
B: Spleen
C: Stomach
D: Kidney
Ans: D
Explanation:
Fenestrated capillaries occur wherever active filtrarion or absorption occurs e.g small intestine, kidney, In cillary process of eye, in choroid plexus.

Q. Histoplasmosis most commonly involved organ system:
A- Renal
B- CVS
C- Respiratory
D- Reticuloendothelial
Ans: D

Q. Athletes have which characteristic change?
A- Dec HR & Increased SV at rest
B- Increase HR
C- Increase BP
D- Increase oxygen
Ans: A

Q. Most common primary brain tumour:
A- Acute leukemia

B- Meningioma
C- AML
D- CML
Ans: B
Explanation:
Most common after radiation – Leukemia
Most common brain tumor after radiation – Meningioma

Q. Which of the following is the primary site of metastatic brain tumour?
Ans: Lung
Primary cancers such as **lung, breast, and melanoma** are most likely to metastasize to the brain

Q. What happens to cancer cells after radiotherapy?
A. Cellular oxidation
B. Coagulation necrosis
C. Autophagy
D. Apoptosis
E. Atrophy
Ans. D

Q. Patient who recently had a kidney transplant now presented to you with difficulty in swallowing, there was some white growth on tongue that can be scraped off. Pseudohyphae present. Likely reason is:
A- Candidiasis
B- Aspergillosis
C- Histoplasmosis
D- Mucor
E- Rhizopus
Ans: A

Q. Alzheimer's case brown color pigment found on heart autopsy. Likely cause is?
A. Wear and tear lipofuscin
B. Hemosiderin
C. Ferriten
D. Lipochrome
Ans: A
Note: Common site of this pigment has also been asked commonly in past papers (heart and liver)
Explanation:
The yellow-brown granular pigment seen in the hepatocytes here is lipochrome (lipofuscin) which accumulates over time in cells (particularly liver and heart) as a result of "wear and tear" with aging.

Q. In a Pregnant lady to diagnose early neural tube defect, which one of the following used?
A- Ultrasound
B- Amniocentesis
C- CVS
D- B HCG
E- X-ray abdomen
Ans: A
AFP raised in – **Anencephaly**
AFP Decreased in – **Down syndrome**
Specific for NTD – **Acetyl cholinesterase**
Senstive for NTD – **AFP**
NTD in **early** Pregnancy Diagnose -- **USG**
NTD in **Late** Pregnancy Diagnose -- **Amniocentesis**
Neural tube defects – most common is **Meningo-myelocele**
Neural tube defects occur due to – **Folic acid Deficiency and vitamin A toxicity.**

Q. Initial test for growth hormone in short stature person:
A. Dexamethasone suppression test
B. Fasting early morning growth hormone
C. Insulin stimulation test
D. Basal growth hormone levels
Ans: c
DNA containing virus
Adenovirus
Explanation:
Human T cell leukemia Virus Type 1 RNA virus – T cell Leukemia
EBV DNA virus – Burkit lymphoma and Nasopharyngeal carcinoma
HPV DNA virus – Squamous cell carcinoma cervix
Hep B DNA virus – HCC
Hep E RNA virus – Not Oncogenic

Q. An adult in sitting position, resonance can be auscultated from back of the chest till:
A- 6th RIB
B- 8th
C- 10th
D- 11th
E- 12th
Ans: C
Explanation:
- Midclavicular line 6th RIB
- Mid axillary line 8th RIB
- Back 10th RIB

Q. Sinusoids of liver are lined by:
A- Epitheliums
B- Basement membrane
C- Fenestrated/non continuous Endothelium
D- Continuous capillaries
Ans: C

Q. A 20-year-old woman at 30 weeks' gestation presents to the emergency room with malaise, headache, and nausea. On physical exam, she is alert and oriented. She is noted to have bilateral lower extremity edema. A urine dipstick shows 2+ proteinuria and her blood pressure is 150/96 mmHg. Her other laboratory values are within normal limits. She is discharged home. The next day, she returns with a worsening headache and found with elevated blood pressure again at 163/100 mmHg. She is admitted and started on magnesium sulfate for seizure prophylaxis:
A. Preeclampsia
B. Atrial rate more than ventricular rate in
C. 2nd degree heart block
D. 3rd degree heart block
Ans: A

Q. A person is unable to make urine below 5.4 pH with ammonium what type of renal tubular acidosis?
A- Type 1
B- Type 2
C- Type 4
D- Type 3
Ans: A

Primary defect	RTA type-I Impaired ability to excrete H^+ in distal tubule	RTA type-II Impaired HCO_3 reabsorption in proximal tubule	RTA type-IV Decreased secretion of aldosterone or decreased effect
Minimum urine pH	pH >5.5	pH <5.5	pH <5.5
Stones	Yes	No	No
Hyperchloremic acidosis	Yes	Yes	Yes
Serum potassium	Low-normal	Low-normal	High
Plasma bicarbonate	<10 meq/L	12–20 meq/L	>17 meq/L

RTA: Renal tubular acidosis, HCO_3: Bicarbonate

Q. A patient presented to you with Achilles tendon xanthomas and was diagnosed with familial hypercholesterolemia where the defect lies in LDL receptor signaling. You know that statins increase LDL receptor signaling. Which type of hypercholesterolemia has defective LDL receptor:
A. Type 1
B. Type 2A
C. Type 2B
D. Type 3
Ans. B

Q. What is the characteristic feature of treponema pallidum?
A- Non motile
B- Visualized using aniline dye
C- Causes yaws
D- Resistant to pencillins
Ans: C

August – Recalls 2021

Q. Lymphatic drainage of external nose is which of following lymph nodes?
A- Submandibular Lymph Nodes
B- Deep cervical lymph nodes
C- Retropharyngeal Lymph nodes
D- Occipital Lymph Nodes
E- Paraaortic Lymph Nodes
Ans: A
Explanation:
- External nose & Anterior nasal cavity drained by submandibular lymph nodes
- Posterior Nasal cavity drained by retropharyngeal lymph nodes & JD nodes.

Q. In a patient loss of two-point discrimination occur after RTA what is underlying mechanism?
A- Feed Forward Mechanism
B- Lateral Inhibition
C- Posterior inhibition
D- Synaptic Plasticity
E- Anterior Inhibition
Ans: B
Explanation:
- Loss of proprioception lesion in – Posterior column (DCML)
- Loss of proprioception mechanism is – Lateral inhibition (Guyton)

Q. 2nd heart sound is produced due to closure of:
A- Mitral valve closure
B- Tricuspid valve closure
C- Aortic and pulmonic valve
D- Pulmonary valve
Ans: C

Explanation:

- First Heart Sound – Isovolumetric contraction (Closure of mitral and tricuspid valve)
- Second Heart Sound – Isovolumetric relaxation (Closure of aortic and Pulmonary valve)
- Third Heart Sound – Rapid ventricular filling (Normal in children, pregnancy and athletes)
- Fourth heart sound – Atrial Systole

Q. 2nd heart sound is due to:

A- Rapid ejection
B- Rapid filling
C- Isovolumatric relaxation
D- Isovolumatric contraction

Ans: C

Q. A woman and man has history of recurrent pregnancy, their clinical and genetic history is unremarkable but all pregnancies end up still birth how will you investigate:

A- Southern blot
B- Tandem mass spectroscopy
C- Next generation sequencing
D- Karyotyping
E- FISH

Ans: D

Q. Leptin mechanism of action is:

A- GS
B- GI
C- Open ion channel
D- Close ion channel
E- Enzyme linked Receptor

Ans: E

Explanation:

Enzyme linked receptor has hormone binding site outside and enzyme binding site inside. when hormone bind extracellular portion of receptor then enzyme inside immediately activated this does not require g proteins e.g. leptin receptor.

Q. A newborn baby is noted to have a left unilateral cleft lip. There are no abnormalities of the baby's palate. Which of the following developmental defects accounts for this occurrence?

A- Failure of the left lateral palatine process to fuse with the median palatine process
B- Failure of the left maxillary prominence to unite with the left medial nasal prominence
C- Failure of the right and left medial nasal prominences to merge
D- Failure of the left maxillary process to fuse with the left medial nasal process

Ans: D

Explanation:

- Mid line cleft lip is failure of fusion of two medial nasal processes.
- Unilateral cleft lip failure of fusion of median nasal process with maxillary process.

Cleft palate failure of fusion of lateral palatine process nasal septum and median palatine process

Q. Epithelium of posterior glottis?

A. Squamous epi keratinized
B. Squamous epi non keratinized
C. Pseudostratified columnar ciliary

Ans: C

Q. Causes of early pregnancy loss which hormone is responsible?

A. Progesterone
B. HCG

Ans: B

Early pregnancy loss → dec. HCG release by corpus luteum

Q. Characteristic of acute leukemia:

Blast cells more than 20%

Q. Which of following structure is behind ovarian fossa?

A- Ureter
B- Internal iliac
C- External iliac artery
D- External iliac vein
E- Obturator

Ans: A > B (Grey's Anatomy)

Explanation:

- Superior – External iliac vein and artery
- Anterior – Broad ligament of uterus
- Posterior – Ureter and Internal iliac artery and vein
- Inferior – Obturator nerve artery and vein

Q. Patient had bruise on elbow, which changed colour from yellow to brown. Pigment:

C. Lipofuscin
D. Hemosidrin

Ans. B

Remember:

Red Oxyhemoglobin 0-2 days
Blue Deoxyhemoglobin 2-5 days

Green Biliverdin 5-7 days
Yellow Bilirubin 7-10 days
Brown Hemosiderin 10-14 days

Q. Child with elevated CK? I think the options were:

A. Cardiomyopathy
B. Ischemic heart disease
C. Muscular dystrophy

Poor recall. But in such a case go with C as the others are less likely.
Granulosa cell tumor marker
Inc. inhibin

Q. Sertoli cells releases which one?

A- Testosterone
B- Luteinizing hormone
C- Androgen
D- Inhibin

Ans: D

Explanation:

- Androgen produce by Lydig cell
- Serotil cell produce Androgen binding protien amd Inhibin.

Q. A young female came with suddeon onset of severe pain, swelling in left ankle joint. He is febrile and his TLC is 12000/C ESR 50MM/HR urine DRE showed few RBCs urea was 40mg/dl and serum uric acid was 601. The diagnostic test in this case would be:

F. Arthroscopy
G. RA factor
H. Synovial fluid aspirate for polarized light/MSU crystals
I. Synovial fluid for C/S
J. X-ray ankle joint

Ans. C

Q. A girl spilled hot water develops bulla few hours after burn later erythema and fever fluid in bullae was opaque redness and warn area around it what's the type of inflammation?

A. Fibrinous
B. Serous
C. Mucinous
D. Prulent
E. Catharal

Ans. B

Q. Which center is responsible for stimulation of respiration?

F. Apneustic
G. Pneumotaxic
H. Cerebellum
I. Dorsal
J. Ventral

Ans. B

Q. Which of the following groups of nuclei is activated during exercise when expiration becomes an active process?

A. Apneustic
B. Pneumotaxic
C. Cerebellum
D. Dorsal
E. Ventral

Ans. E

Q. What is true regarding hematopoiesis in humans?

Ans. T lymphocytes are more than B lymphocytes (T cells 80% and B cells 20%)

Q. Lady having gastric rugal folds atrophy and having anemia- peripheral film showed hyper segmented neutrophils. What is the diagnosis?

Ans: Pernicious anemia

The causative agent for diarrhea in HIV patients showing enlarged cells with a big, reddish-purple intranuclear inclusion surrounded by a clear halo and peripherally clumped chromatin CMV?

Q. 45-year-old woman having anxiety, palpitations and weight loss with Increase T3 T4 Decrease TSH most likely diagnose is:

A- Primary Hypothyroidism
B- Primary Hyperthyroidism
C- Secondary Hyperthyroidism
D- Tertiary Hyperthyroidism
E- Primary Hyperparathyroidism

Ans: B

Q. Common cause of otitis media in children:

A- Step pneumonia
B- H influenza
C- Beta hemolytic streptococii
D- Staph aureus

Ans: A

Q. Arthus reaction is an example of:

A. Type 1 HS
B. Type 2 HS
C. Type 3 HS

Ans. C

Q. A child has recurrent infection and every time klebsiela was found. What is dx?

A- SCID
B- Brutons agammaglobinemia
C- Common variable immunodeficiency
D- CGD

Ans: D

Q. Feathery degeneration of hepatocytes on staining due to:

E. Fe accumulation
F. Lead accumulation
G. Cu accumulation
H. Bile salts

Ans. D

Q. Yellow brown granules were found in the hepatocytes of a man who was diagnosed with hereditary hemochromatosis, these granules became blue after staining with Prussian blue. These are:

E. Transferrin
F. Hemosiderin
G. Bilirubin
H. Biliverdin

Ans. B

Q. Child had fever Sore throat took antibiotic for 3 weeks later develop generalized edema hematuria likely diagnose is:

A- RPGN
B- Membranous nephritis
C- PSGN
D- FSGN
E- IgA nephropathy

Ans: C

Q. In a 56-year-old man suffering from bone pains and chronic fatigue rouleax formation is noted in RBCs and lytic lesions are present in bones. Diagnosis?

Ans: Multiple myeloma

Q. A 26 yrs female presented with 1-year history of fever on and off documented to be 104F, myalgias, restricted movements due to weakness. There is history of hair fall and sore throat and exophthalmos, investigation reveals hypoalbuminemia, proteinuria, pleural fluid shows lymphocytosis and less protein, ESR 70, HB 7.1, TSH markedly reduced and raised T3 and T4. What is your probable diagnosis?

1) Pulmonary Tuberculosis
2) Grave's Disease
3) SLE
4) Autoimmune thyroiditis
5) Brucellosis

Ans. C

Q. A patient has anemia and hyper segmented neutrophils are present on peripheral blood examination he is also having difficulty in balance. which type of anemia he is suffering from?

A. Folic acid
B. Iron
C. Pernicious
D. Thalasemia
E. Autoimmune hemolytic

Ans. C

Q. Associated with rock crusher?

A. Anthracosis
B. Asbestosis
C. Silicosis

Ans. C

Q. Pleural plaques are pathognomic of:

A. Anthracosis
B. Asbestosis
C. Silicosis

Ans. B

Q. Which of the following is investigation of choice for the diagnosis of typhoid in 1st week?

A- Blood culture
B- Urine culture
C- Stool culture
D- Bone marrow examination
E- Widal test

Ans: A

Explanation:

BASU

- Blood culture – 1st week
- Agglutination test (Widal Test) – 2nd week
- Stool culture – 3rd week
- Urine culture – 4th week

Q. A young boy having mass in neck biopsy of lymph node shows effaces architecture atypical mononucleosis cell with bilobed nucleus and

eosinophilia and CD 15 and CD 30 positive diagnose is:

A- Non Hodgkin lymphoma
B- Hodgkin lymphoma
C- T cell leukemia
D- Infectious mononucleosis
E- Burkit lymphoma

Ans: B

Explanation:

Reed sternberg cell is variety of hodgking lymphoma having bilobe cell and CD 15 and CD 30 positive.

Q. Most common deficiency in steroidogenesis pathway is:

A. 17 alpha hydroxylase deficiency
B. 21 alpha hydroxylase deficiency

Ans. B

Instruments are ideally cleaned –
Autoclaving at 121°c for atleast 30mins at 15 psi

Q. How are cystoscopes and endoscopes sterilized?

E. Isopropyl alcohol
F. Autoclaving
G. Tyndilization
H. Chlorhexidine

Ans. C

Q. PAS positive:

A. Bacteria
B. Fungi
C. Spirochetes
D. Viruses

Ans. B

Q. Type of hyperlipidemia which has both TG and cholesterol inc?

Ans: Type 1

Q. Posterolateral wall MI, artery involved?

A. LCX
B. RCA

Ans. A

Q. Heat loss of body is controlled by:

A- Lat. hypothalamus
B- Preoptic hypothalamus
C- Post. hypothalamus
D- Thalamus

Ans. C

Q. Substance which adheres to host protein present on bacteria?

Ans. Pilli

Q. Rathkes' pouch is developing from:

A- 1st pharyngeal arch
B- Stomodaeum of fore gut
C- Neural crest cell
D- 6th pharyngeal pouch

Ans: B

Q. The most common exogenous pigment is:

A. Carbon
B. Silica
C. Nitrate
D. Phosphate
E. Silver

Ans. A

Q. What cellular structure present in ovum after its release?

a. Corona radiata
b. 1st polar body
c. 2nd polar body
d. Female pronucleus

Ans. ?

Q. Upon autopsy, a patient was having a thrombus and line of zahn this is seen in:

A- Chicken fat supernatant
B- Pre mortem thrombus
C- Post mortem thrombus
D- Chicken lipid thrombus

Ans: B

Explanation:

Line of Zahn seen in

- Coraline Thrombus
- Pre mortem Thrombus
- Arterial Thrombus

Chicken fat appearance seen in
Post mortem thrombus

Q. Patient is a case of ITP given IVIG what is the mechanism of action of IVIG?

A. Competitively binds to receptors on macrophages
B. FC receptor binding
C. Inhibit t-lymphocytes
D. Inhabit B cells to produce antibody

Ans. B

Q. Spore killing is via:

E. Moist heat at 121C for 15 minutes and 15 psi presssure
F. Moist heat at 131C for 15 minutes and 15 psi pressure
G. Dry heat at 121C for 15 minutes and 15 psi pressure

H. Dry heat at 131C for 15 minutes and 15 psi pressure

Ans. **A** (Remember: If this is not in options then choose "dry heat for 2 hours at 160C")

Q. **Mental foramen location related to mandible and mental nerve at the level of:**

A- 1st premolar
B- 2nd lower premolar
C- 1st upper molar
D- 2nd upper molar
E- Canine

Ans: **B**

Q. **50 years old patient developed Chest pain for 2 hours, not relieved by nitrates, bp 110/70, pulse 100bpm, what's next best investigation to do?**

A- CPK
B- Myoglobin
C- Trop T
D- CBC
E- LDH

Ans: **B**

Explanation:

Best Initial Investigation of choice – ECG
1-2 hr – Myoglobin
Within 4hr – CK MB
After 4hr – Trop
Sensitive – Trop T
Specific – Trop I

Q. **Anaphylatoxins are:**

Ans: C3a and c5a

Q. **Most common of megaloblastic anemia:**

A. Folate deficiency anemia
B. Methemoglobin contains
C. A denatured globin
D. Ferriprotoporphyrin
E. Globin of one species with heme of another

Ans. **B**

Q. **Thalasemia are characterized by:**

a. Dec synthesis of globin chains
b. Inc synthesis of globin chains
c. Defective globin and alpha chain
d. Defective globin and beta chain

Ans. **A**

Q. **Patient is having rhinoinusitis and nasal polyp with the fungus invading lamina papyracea, excessive endothelial damage and having non septate hyphae organism involved is:**

A- Candida
B- Histoplasmosis
C- Aspergillus
D- Mucor
E- Rhizopus

Ans: **D** (FA)

Q. **A non-diabetic female having chronic rhino sinusitis develop fungal infection that shows septate hyphae at acute angle and producing respiratory symptoms most likely fungus is:**

A- Candida
B- Histoplasmosis
C- Aspergillus
D- Mucor
E- Rhizopus

Ans: **C** (FA)

Q. **Glycolytic enzyme present in RBC:**

A- Cytoplasm
B- Mitochondria
C- Nucleus
D- Cell

Ans: **A**

Q. **Athletes have which characteristic change?**

A- Increased SV at rest and decreased HR
B- Increase HR
C- Increase BP
D- Increase oxygen

Ans: **A**

Q. **Which of the following stimulate RBC growth?**

A. IL2
B. IL6
C. IL3
D. IL1

Ans. **C**

Remember: RBC (1+1+1) = 3 so IL3

Q. **19yr old boy presented to ER in unconscious state, his breath had fruity smell, temp 39, pulse 90, glucose 400, potassium 3.5, urea 10. Diagnosis:**

A. HONK
B. DKA

Ans. **B**

Q. **A 12-year-old boy, previously healthy, is admitted to the hospital after 2 days of polyuria, polyphagia, nausea,**

vomiting and abdominal pain. Vital signs are: Temp 37C, BP 103/63 mmHg, HR 112, RR 30. Physical exam shows a lethargic boy. Labs are notable for WBC 16,000, Glucose 534, K 5.9, pH 7.13, PCO_2 is 20 mmHg, PO2 is 90 mmHg. What is the diagnosis?

A. DKA
B. HONK
C. Hypothyroidism
D. Iron deficiency

Ans. A

Q. Patient had eaten fried rice 6 hours ago now presented with nausea vomiting and diarrhea cause is:

A- Staph aureus
B- Salmonella
C- Bacillus cereus
D- Vibrio cholera

Ans: C

Q. 11 years child wirh joint pain and swelling, which organism involved in septic arthritis:

A. Staph aureus
B. Streptococcus
C. H.influenza

Ans. ?

Q. Hyperexcitability of neurons due to deficiency of:

A. K
B. Na
C. Ca
D. Cl

Ans. C

Q. A child has history of pica now having pallor, fatigue diagnosed as iron deficiency anemia what should be given?

A- B12
B- B6
C- Iron Supplement
D- Folate
E- B12

Ans. C

Q. Bence jones protein are found in which disease?

Ans. Multiple myeloma

Q. Philadelphia chromosome is associated with?

A- CML
B- AML
C- ALL
D- CLL

Ans. A

Q. G coupled phospholipase C is increased by some substance and this will lead to increased:

A- CAMP
B- CGMP
C- Tyrosine kinase
D- Calcium level
E- IP3

Ans: D

Q. How does insulin act:

A. Voltage gated ion channels
B. Tyrosine kinase membrane receptor
C. Nuclear receptor
D. G protein

Ans. B

Also know:

Q. Tyrosine kinase receptors present:

A. Inside the cell membrane
B. Cytoplasm
C. Nucleus

Ans. A

Q. Most potent chemotactic factor:

A. C5a
B. LTB4
C. B>A

Ans. ?

Q. In treatment of SAH, which CCB can be used?

A- Nifedipine
B- Verapamil
C- Diltiazem
D- Nimodipine

Ans: D

Q. Mitral stenosis now developed dyspnea and orthopnea cause?

Ans. Pulmonary hypertension

Q. A patient was diagnosed with mitral stenosis, now he has developed dyspnea and orthopnea. What has now developed?

A. Pulmonary HTN
B. LVH
C. Cardiac tamponade

Ans. A

Q. Drug of choice in meningitis:

A- Penicillin G

B- Benzylpenicillin
C- Cefazolin
D- Azitheomycin
Ans: A

Q. A male who have chest pain specific gravity more than 1.023 protein more than 3mg pericardiocentesis was done the fluid is called:
A. Transudate
B. Exudate
Ans. B

Q. When a firm stroke with a pointed object is applied on the skin there is spreading redness due to arteriolar dilation the response is due to?
A. Axon reflex
B. Histamine
C. Mechanical stimulation
D. Tissue injury
Ans. B

If flare mention, then axon reflex...if redness and dilation mention then histamine. wheal formation mention then local edema due to inc capillary permeability.

Q. 25 years old married female came to you with history of amnoerhea for 3 weeks her pregnancy test is negative. What could be the cause?
A- Ectopic pregnancy
B- Anovulation
C- Appendicitis
D- Anorexia Nervosa
E- Normal
Ans: B

Q. In hyperkalemia drug which is aldosterone antagonist and contraindicated is?
A- Furosamide
B- Hydrochlorothiazide
C- Spiranolactone
D- Mannitol
Ans: C

Q. Patient was diagnosed with liver disease and Ascities and Ascitic tap need to be done. Needle passed in lower abdomen which artery should be avoided to cut:
A- Superior eigastric artery
B- Inferior epigastric artery
C- Cremasteric artery
D- Celiac trunk
E- Aorta
Ans: B

Q. Cells present between intralveolar septum:
A: Alveolar cells
B: Alveolar macrophages
C: Type 1 pneumocytes
D: Type 2 pneumocytes
Ans: B

Q. Cervical sympathetic chain damage will cause:
A- Sweating
B- Decrease hearing
C- Shoulder drop
D- Increase pupillary constriction
Ans: D

Q. Rise in systemic filling pressure, right atrial pressure and decreased venous resistance in which conditions?
A- Hemorrhage
B- Exercise
C- Sympathetic
D- Parasymathetic
Ans: B

Q. Density of CSF is:
A- 1.005 – 1.009
B- 1.001 – 1.005
C- 1.0005
D- 1.009
E- Less than 1.001
Ans: C

Explanation:
- CSF Density is 1.0005.
- CSF Specific Gravity is 1.005.
- CSF PH is 7.33

Q. Drug of choice for atrial fibrillation rhythm cardio version is:
A- Amiodarone
B- Flecainide
C- Sotalol
D- Captipril
Ans: A

Explanation:
- Post MI for general Arrythmia DOC is – Lidocain
- For rate control in AF – Beta blockers & Digoxin (Davidson)

- For rhythm control in AF with no Structural Heart Disease – Flecainide (Davidson)
- For rhythm control in AF with IHD or structural heart disease – Amidarone (Davidson)

Q. The drug of choice in treating beta blocker overdose is:

A. Atropine
B. Adrenaline
C. Dopamine
D. Glucagon
E. Noradrenaline

Ans. D

Q. In hanging death occur due to:

A- Fracture of Atlas
B- Fracture of odontoid of Axis
C- Fracture of C3

Ans: B

Q. Which of the following labs is deranged in vWD?

Ans. Increase BT

Q. Compliment fixation:

A. IgA
B. IgG1
C. IgG2
D. IgG3

Ans. D

IgM >IgG (G3>G1>G2>G4)
IgA can't Fix compliment

Q. A farmer while spraying pesticides to the fields developed the signs and symptoms of toxicity, what is used for the organophosphate poisoning?

A- Atropine
B- Barbiturate
C- Naloxone
D- Lidocaine
E- Procain

Ans: A (No pralidoxime option)

Explanation:

- For Symptoms Reversal – Atropine
- Specific Antidote – Pralidoxime

Q. Staining shows gram positive cocci in chain. Many attempts made but cannot be cultured. What other technique can be used to apart from it?

A- PCR and rRNA amplification
B- SDS polyacrylamide gel electrophoresis
C- Enzyme electrophoresis
D- Serology

Ans: D

Q. In voluntary contraction, descending pathways cause excitation of:

A- Alpha motor neurons discharge
B- Both alpha and gamma motor neuron discharge
C- Presynaptic nerves inhibited
D- Postsynaptic nerve inhibited

Ans: B

Q. Loss of accomodation reflex, lesion in which area?

A- Cerebellum
B- Mid brain
C- Pons
D- Cerebral Cortex
E- Medulla

Ans: D

Explanation:

- Loss of Accommodation reflex – Cerebral cortex
- Loss of Accommodation – Cerebral cortex
- Loss of Accommodation + 3rd CN Involvement – Midbrain (due to Edinger westphal nucleus)

Q. 30-year-old male who was treated for meningitis one month back has complaint of morning headache. O/e there is bilateral papilledema. Likely cause:

A- Blockage of dural sinus
B- Hydrocephalus
C- Involvement of meninges
D- Involvement of cerebral vessels
E- Subdural collection

Ans: B

Nerve supply of oribicularis oculi is temporal branch of facial nerve

Q. Patient k/c of schizophrenia was in motionless state already on clozapine and was stable, stopped taking it month before. Now not taking any food or anything since one week. What could be the best treatment?

A- Restart clozapine
B- Antidepressants
C- Depot anti-psychotics
D- Shift to ECT

Ans: A

Q. Patient presented with history of head trauma his urine osmolarity was decreased & Plasma osmolarity increased also developed symptoms of polydipsia and polyuria and Positive CH2O clearance likely cause would be:

A- Central Diabetes insipidus
B- Nephrogenic Diabetes insipidus
C- Diabetes Mellitus
D- SIADH
E- Psychogenic Polydyspia

Ans: A

Q. Fetal blood leaving placenta having oxygen is:

A- 20mmhg
B- 30mmhg
C- 50mmhg
D- 60mmhg
E- 100mmhg

Ans: B

Q. After heart transplantation infection commonly transmitted is:

A- HCV
B- HBV
C- CMV
D- HSV
E- EBV

Ans: C

Explanation: CMV >Hep B >Hep C

Ptosis and diplopia are due to lesion of CN 3

Q. Steady pressure detected by which of following?

A- Free nerve endings
B- Golgi tendon organ
C- Mesinner corpuscles
D- Ruffini receptor
E- Krause receptor

Ans: D

Explanation:

Ruffini

- Deep static "Pressure"
- Detect warmth
- Encapsulated
- Large receptive field

Miessner

- Light "Touch"
- Low frequency Vibration
- Upto 40Hz Frequency
- Abundant on Fingertip
- On Hairless Skin
- Encapsulated

Pacinian

- High frequency Vibration
- From 40 to 400 Hz Frequency
- Detect tuning fork frequency (128Hz)
- Deep "Touch "
- Encapsulated
- Onion like on Subcutaneous Skin

Merkel Disc

- Deep "Static Touch"
- Non Capsulated

Krause

- Detect Cold

Q. Regulation of potassium in body is done by which of following?

A- Insulin
B- Renin
C- Aldosterone
D- Cortisol
E- GH

Ans: C

Q. A student came with pale nasal mucosa, nasal congestion and sneezing. He is having these symptoms since 3 months which among them will be effective now?

A- Fexofenadine
B- Montelocast
C- Ranitidine
D- Cimetidine
E- Nasal Corticosteroid

Ans: E

Q. Lymphatic drainage of the fundus of stomach is:

A) Celiac node
B) Superior gastric node
C) Hepatic nodes
D) Inf mesenteric nodes

Ans. A

Q. Hypersensitivity reaction in SLE:

A. Type 1
B. Type 2
C. Type 3
D. Type 4

Ans. C

But if asked

Q. Type of hypersensitivity reaction in SLE patient responsible for hematological disturbances:

A. Type 1

B. Type 2
C. Type 3
D. Type 4

Ans. ?

Q. Man presents with gradual loss of vision, radiological studies show growing clot in a vessel, most likely involved:

A. Vertebral artery
B. Basilar artery
C. MCA
D. PCA
E. Posterior communicating artery

Ans. D

Q. Most radio sensitive structure among the following:

A: Lymph node
B: Meningioma
C: Glial Glioma
D: Seminoma

Ans: A

Explanation:

Lymphoma > Seminoma > glioma > craniopharyngioma

Drug used to treat myasthenia gravis and is used in oral tablet form pyridostigmine

Q. 10-year-old child having cystic swelling in midline of neck thyroglossal duct cyst most appropriate will be commences with base of tongue rapid ventricular filling produces:

A- 1st heart sound
B- 2nd heart sound
C- 3rd heart sound
D- 4th heart sound

Ans. C

Q. 70% oxygen used by which organ at rest?

A. Heart
B. Stomach
C. Liver
D. Kidney

Ans. A

Q. A man after a marathon, harmonal level:

A- Increase Insulin
B- Increase glucagon, low insulin
C- Low Glucagon Low insulin
D- Increase insulin and increase Glucagon

Ans. B

Q. A patient has been taking anti-tuberculous therapy for MDR-TB. His drugs regimen contains 6 drugs. The patient eventually develops difficulty in distinguishing red & green colours. Which of the following drugs is responsible for this effect?

A- Amiodrone
B- Pyrazinamide
C- Rifampicin
D- Ethambutol
E- Ciprofloxacin

Ans: D

Explanation:

Isoniazid – Peripheral neuropathy
Rifampicin – Orange Color urine
Ethambutol – Optic neuritis
Pyrazinamide – Hyperuricemia

Q. A patient suffering from chronic respiratory failure:

A. Doesn't increase his ventilation in response to lack of oxygen
B. Is likely to have raised calcium
C. Is likely to have alkaline urine
D. Should be given 100% oxygen on admission to hospital
E. Shows an increased respiratory sensitivity to carbondioxide

Ans. B

Q. 26-year-old patient came in ophthalmology OPD with complain of inability to differentiate between different colors where is the pathology?

A- Rods
B- Cones
C- Fovea
D- Optic disc
E- Macula

Ans: B

Explanation:

Rods	Cons
Night Vision	Day Vision
Low Resolution	High Resolution
Black Vision	Color Vision
Found in periphery	Found in centre (Fovea)
Many	Few

Q. Appropriate function of sternocleidomastoid?

A- Turns neck to the same side against resistance
B- Flexes neck
C- Extends neck
D- Turns neck to the opposite side against resistance

Ans. D

Q. After finger cut what is the first response of body after bleeding?

A- Blood Vessel Constriction
B- Prostaglandin
C- Neutrophil
D- Chemotaxis
E- Rolling of WBC

Ans: A

Q. Slow writhing movements are called athetosis due to defect in which of following?

A- Globus pallidus
B- Caudate
C- Subthalamus
D- Thalamus
E- Cerebellum

Ans: A

Q. Regarding skeletal muscles what is true?

A- Fleshy Belly Throughout
B- Aponeurosis is Fibrous
C- Distal Insertion is Fixed
D- Origin causes Movement

Ans: A

Q. For conversion of glucose 1 phosphate to glucose 6 phosphate require:

A. Phosphoglucomutase
B. Phosphoglucoisomerase

Ans. A

Q. Cortisol effect on carbohydrate metabolism in liver is:

A- Glycogenolysis
B- Gluconeogenesis
C- Glycogenesis
D- Glycolysis
E- Lipogenesis

Ans: B

Q. According to recalls gluconeogenesis was not in the options:

A. Cortisol main function
B. Lipolysis
C. Glycogenesis
D. Ketogenesis
E. Glycolysis

Ans. B

Q. Daily requirement of protein according to FDA:

A: 3gm/kg
B: 1gm/kg
C: 5gm
D: 15gm

Ans: B

Q. Daily dietary intake of protein for 70kg man is:

A. 12 gm
B. 120 gm
C. 20 gm
D. 50 gm

Ans. d

Q. DIC is a common problem in:

Ans. AML

Q. DNA replication occurs in which stage?

A- Interphase
B- Metaphase
C- Anaphase
D- Prophase

Ans: A

Q. Most common cause of nasopharyngeal carcinoma is:

A- CMV
B- EBV
C- HPV
D- HSV
E- Adenovirus

Ans: B

Explanation:

Nasopharyngeal CA – EBV
Oropharyngeal CA – HPV
Lung CA – CMV
Esophagus starts from cricoid cartilage

Q. A positive HBsAg indicates:

A) Carrier stage
B) High incidence of chronic Hep B
C) Resolved stage
D) infectivity of Hep B
E) Window period

Ans. B

Q. Which hormone always acts through CAMP second messenger system?

A- TSH
B- Dopamine
C- Glucocorticoid

D- ADH
E- ANP
Ans: A

Q. Howship lacunae contain:
A. Chondrocyte
B. Chondrblast
C. Osteoclast
D. Osteocyte
Ans: C

Q. Hypoxemia causes hyperventilation by acting on:
A. Respiratory center in pons
B. Respiratory center in medulla
C. Carotid body
Ans: C

Q. If thoracic duct obstructs swelling will develop in all of the following except:
A. Upperlimbs
B. Lower limbs
C. Cerebral hemispheres
D. Abdomen
Ans: C

Q. Which of the following vitamin is deficient after acute pancreatitis?
A- B12
B- B7
C- Vitamin D
D- Vitamin C
E- Thiamine
Ans: C

Q. Diagnostic criteria for bronchial asthma:
A- FEV1 >65
B- FEV1/FVC<65%
C- FEV1 ZERO
D- FEV1/FVC normal
E- FVC normal
Ans: B

Q. Ipratropium is preferred on b2 agonist in which disease?
A. Chronic bronchitis
B. Status asthmaticus
C. Chronic asthma
Ans: A

Q. Ischemic reperfusion injury is due to:
A. Neutrophils
B. Monocyte
C. Lymphocyte
Ans: A

Q. Renal biopsy from HIV patient microscopic findings:
A. Focal segmental glomerulosclerosis
B. Focal segmemental glomerulonephritis
Ans: A

Q. Most important event in irreversible cell injury:
a. Damage to cell membrane
b. Loss of co enzyme
c. Massive calcium influx
d. Swelling of lysosomes
e. Swelling of mitochondria
Ans: C

Q. Mechanism of action of glucagon:
A) Stimulate protein kinase
B) Stimulate CAMP
C) Suppressing adenylatecyclase
Ans: B

Q. Protrusion of jaw along with medial pterygoid is done by:
A. Lateral pterygoid
B. Omohyoid
C. Geniohyoid
D. Temporalis
Ans: A

Q. Most effective DMARD in R.A?
A. Chloroquin
B. Gold
C. Methotrexate
D. Penicillamin
Ans: C

Q. Myelination in CNS is done by:
A- Parietal Cells
B- Chief Cells
C- Peneath Cells
D- Oligodendrocytes
E- Basal Cells
Ans: D

Q. Nerve immediate lateral to trachea:
A- Vagus
B- RLN
C- ELN
D- ILN
Ans: B

Q. Parotid duct pierce which of following?
A- Platysma
B- Buccinator
C- Pterygoid
D- Temporalis
Ans: B (BD+Snell)

Q. Patient is on antipsychotic drugs now developed deranged thyroid function tests, which drug was he taking?

Ans: Lithium

Q. Regarding smooth muscles:

A. Forms myofibril
B. Somatic innervation
C. Cardiac muscle is specialized smooth muscles
D. Has circular and longitudinal layers
E. Peak action potential rises with increase sodium influx

Ans: D

Q. Thermophilic actinomycetes causes:

a. Farmers lung
b. Humidifier fever
c. Fancier lung
d. Bysinossis
e. A, B

Ans: E

Q. Treponema pallidum how it enters human body and Disseminates via?

Ans: Hyaluronic acid activity

Q. Regarding bronchopulmonary segments:

A- Supplied by primary bronchii
B- Aerated by tertiary bronchus
C- Not directly related to each other
D- Supplied by Alveoli

Ans: B

Q. Which hormone causes protein, carbohydrate and fat storage in body?

A. Insulin
B. Growth hormone
C. Thyroid
D. Cortisol

Ans: A

Q. Which part of limbic system is involved in emotions?

A. Hipppcampus
B. Amydala
C. Thalmus
D. Cinguate gyrus

Ans: B

Q. Patient having complains of numbness and tingling sensation of fingers and toes diagnosis of B12 deficient was made how will you treat?

A- Oral B12
B- IV B12
C- IM B12
D- S/C B12
E- Intradermal B12

Ans: C

Q. Thyroid moves with swallowing due to which of following:

A- Prevertebral fascia
B- Pretracheal fascia
C- Subcutaneous fat
D- Muscles
E- Cartilage

Ans: B

Q. Middle meningeal artery passes from which foramen?

A- Rotendum
B- Cecum
C- Spinosum
D- Ovale

Ans: C

(Don't confuse with accessory meningeal artery which passes from foramen ovale)

Explanation:

Foramen Ovale – Acessory Meningeal artery pass
Foramen Spinosum – Middle meningeal artery pass
Superior orbital fissure – V1 (Opthalmic nerve) pass
Foramen rotandum – V2 (Maxillary Nerve) Pass
Foramen ovale – V3 (Mandibular Nerve) pass
Jugular foramen – CN 9, 10, 11 (Accessory part) & sigmoid sinus
Hypoglossal canal – CN 12
Foramen magnum – Brain stem & spinal part of CN11

Q. Accessory meningeal artery enters from which foramen?

A- Rotendum
B- Cecum
C- Spinosum
D- Ovale

Ans: D

Q. Costal cartilage are bar of which of following cartilage?

A- Fibrocartilage
B- Synovial cartilage
C- Hyaline cartilage
D- Elastic cartilage

Ans: C

Q. Sequence of events in infective endocarditis:

A- Damaged valve > thrombus > penetration> bacteremia
B- Damaged valve> thrombus > bacteremia >penetration
C- Damaged valve > perforation > thrombus > bacteraemia
D- Damaged valve > bacteremia > thrombus > perforation
E- Bacteremia > thrombus > perforation > emboli

Ans: B (DTBP)

Q. A patient had non-productive cough for 2 months' non-smoker. Now presented with blood streaked sputum. Left Lung has 5 cm hilar mass. Sputum shows hyperchromatic, pleomorphic cells with scanty cytoplasm. Cause of this condition?

A- Silicosis
B- Asbestosis
C- Smoking
D- Passive smoking
E- Radon exposure

Ans: E

Q. Left temporal gyrus/lobe lesion results in which of following effect?

A- Right superior quadrantanopia
B- Left superior quadrantanopia
C- Right inferior quadrantanopia
D- Left inferior quadrantanopia
E- Left homonymous hemianopia

Ans: A

Explanation:

- Temporal lobe (Meyer loop) involve Lower retina result in Contralateral superior quadrantanopia
- Parietal lobe involves upper retina result in contralateral inferior quadrantanopia.

Q. An iv infusion of dopamine was started in a patient in a dose which will produce therapeutically effective blood levels reaching steady state concentration. After starting this infusion, dopamine action in the patient will begin after:

A) 15 minutes
B) 5 minutes
C) 9 minutes
D) 25 minutes
E) 2 minutes

Ans: C

30. Following is mesenchyme in origin which surround the neural tube?

A. Ependyma
B. Microglia
C. Asrocyte
D. Cilliary muscle or cillary body one was in option

Ans: B

Q. Neuronal regeneration in CNS by:

A. Oligodendroctes
B. Astrocytes

Ans: B

Q. Don't confuse this with cell causing hindrance to regeneration of CNS:

A. Oligodendrocytes
B. Astrocytes
C. Schwann cell
D. Neurogliaa

Ans: A

Q. A patient is having bitemporal hemianopia with increase of jaw protrusion due to lesion of:

A- Pituitary adenoma
B- Optic nerve lesion
C- Optic radiation
D- Occipital cortex lesion
E- Optic tract lesion

Ans: A

Q. Inheritance pattern of osteogenesis imperfecta is:

A. AR
B. AD
C. AR &AD
D. X Linked Dominant

Ans: B

Q. Abductor of vocal cord is:

A. Posterior cricoarytenoid
B. Lateral aretenoids
C. Cricothyroid
D. Thyroaretenoid

Ans: A

Q. A known CLD patient developed edema, the likely mechanism is:

A- Decrease oncotic pressure
B- Increase hydrostatic pressure
C- Increase oncotic pressure
D- Salt Retention

Ans: A

Explanation:

Peripheral edema in CLD due to – Loss of albumin (Low oncotic pressure)
Ascities in CLD due to – Portal HTN
Renal origin Edema due to – Loss of albumin (Low oncotic pressure) + Can be salt and water retention.
Nephrotic syndrome edema due to – Hypoalbuminemia
Nephritis Syndrome edema due to – Salt and water retension
Pedal edema in CHF and HTN due to – Increase hydrostatic pressure
In CHF edema woarsen by – Sodium and water retention

45.Fibers leave optic tract for circadian rhythm and goes to:
Suprachiasmatic nucleus of hypothalamus
Calcium and phosphate balance is maintained by PTH

Q. The action of nor adrenaline released at post ganglionic adrenergic nerve endings are terminated by:
A. Reuptake into adrenergic neurons
B. Inactivation by mao
C. Inactivation by comt
Ans: A

Q. FFP are used in treatment of:
A. Hemophilia
B. Vit. K def
C. Vit. D def
D. Vit. C def
Ans: B

Q. After burn, debridement was done. Wound contraction is mediated by which of the following?
A- Fibroblasts
B- Myofibroblasts
C- Endothelial cells
D- Collagen type 3
E- Steroid
Ans: B

Q. Cell shrinkage, cytoplasmic blebs are a feature of:
A. Irreversible injury
B. Apoptosis
C. Necrosis
Ans: B

Q. Goblet cells are present in:
A- Proximal bronchiole
B- Trachea
C- Alveoli
D- Bronchi
Ans: D
Explanation:
Clara cells present in – Terminal bronchioles
Goblet cells present in – Bronchi or tertiary bronchus

Q. Site of major blood vessels in brain covering:
A- Pia Matter
B- Sub arachnoid space
C- Dura matter
D- Epidural
Ans: B

Q. Common manifestation of autoimmune disease:
a) Hematological
b) Arthritis
c) Rash
d) None
Ans: A

Q. Lateral ventricle enlarged, blockage is likely in:
Ans: Foramen of Monro
- ✓ Lateral ventricle to 3rd via interventricular foramina of monro
- ✓ 3rd to 4th via cerebral aqueduct (blockage can cause hydrocephalus)
- ✓ 4th to subarachnoid space via foramen magendie and foramen luschka
- ✓ CSF made by choroid plexus (Ependymal cells) in 4th and lateral ventricle

Q. A child born with urine coming out from umbilicus doctor diagnosed this as patent lumen of allantois which results in which of following?
A- Urachal fistula (Patent Urachus)
B- Urachal cyst
C- Urachal sinus
D- Extrophy of bladder
E- Atrophy of bladder
Ans: A

Q. A tall young man had aortic root dilation upto 4cm, ocuular examination showed lens dislocation mitral valve leaflet defect with a systolic click. What is diagnose?
A- Ehlers danlos syndrome
B- Marfan syndrome
C- MI
D- Homocystinuria

E- Dissecting aneurysm
Ans: B
Q. Rapidly adapting phasic receptors detect change in pressure and vibration is which of the following?
A- Ruffini
B- Merkel disc
C- Pacinian corpuscles
D- Baroreceptor
E- Krause receptor
Ans: C
Q. Which of following wave on JVP correspond ventricular contraction?
A- A wave
B- V wave
C- C wave
D- X descent
Ans: C
Explanation:
A wave – Atrial Contraction
C wave – Right ventricle contraction (Closed tricuspid valve bulging into atrium)
X descent – Closed Tricuspid Valve downward displacement during rapid ventricular ejection phase
Absent X descent – RHF and T.R
V wave – Increase Right atrial pressure due to filling against closed tricuspid valve
Y descent – RA emptying into RV
Slow Y descent – T.S
Rapid Y descent – Constrictive pericarditis
Absent Y descent – Cardiac temponade
Prominent A wave – T.S, P.S and pulmonary HTN
Giant A wave – AV dissociation, complete heart block
Prominent V wave – T.R
Q. AV nodal delay help in which of following?
A- Atrial filling
B- Ventricle filling
C- Aorta filling
D- Ventricle contraction
E- Atrial contraction
Ans: B
Q. Increase neuronal activity before a skilled voluntary movement:
A- Spinal motor neuron
B- Cortical association area
C- Basal ganglia
D- Cerebellum
Ans: B
Q. Screening test is done:
A- Early detection of disease
B- Acceptable to general population
C- Should be 100% sensitive and specific
D- Cost effective
Ans: A
Q. Most common complication of hypertension?
A. Stroke
B. Heart failure
C. Renal failure
D. Blindness
Ans: A
Q. Female patient on HRT having risk of which of the following?
A- Ovarian CA
B- Endometrial CA
C- Breast CA
D- Headache
E- Thromboembolism
Ans: E
Q. Malignancy of tumor is determined by which of the following?
A- Pleomorphism
B- Metastasis
C- Decrease N/C ratio
D- Dysplasia
E- Increase N/C ratio
Ans: B
Explanation:
For malignancy – Metastasis > Invasion of adjacent tissues > pleomorphism > increased N/C ratio
Grading – Nuclear differentiation /degree of differentiation / Mitosis
Staging – Extent of spread / Lymph nodes involvement
Pre-malignant lesion – Pleomorphism Diagnostic
Pre-malignant condition – Increased N/C ratio diagnostic
Q. Broca's area located in:
A- Inferior frontal lobe
B- Superior frontal lobe
C- Superior temporal gyrus
D- Inferior frontal gyrus
Ans: D
Explanation:
- Broca aphasia – Motor aphasia + Non-fluent + area 44 and 45 + inferior frontal gyrus

- Wernicke aphasia – Sensory aphasia + fluent + area 22+ superior temporal gyrus
- Global aphasia – Both Wernicke and broca aphasia + arcuate fasciculus
- Anomic aphasia – Mild fluent aphasia + failure of word retrieval + angular gyrus

Child with fever, sore throat, whitish membrane visible over tonsils, metachromatic granules, organism responsible. Corynebacterium diphtheria

Q. Sertoli cell appropriate is:
A. Secrete FSH
B. Secrete LH
C. Secrete Testosterone
D. Provide blood testis barier
Ans: D

Q. Kaplan meier curve indicates which of following?
A- Incidence of disease
B- Demography
C- Severity of disease
D- Drug side effects
E- Survival of Patient
Ans: E

Q. Healing of wound done by:
A. Microfilament
B. Intermediate filament
C. Cytokeratin
D. Microtubule
Ans: A

Q. Hypothyroidism due to disease of thyroid gland is associated with increase plasma level of:
A. Cholesterol
B. Albumin
C. Reverse t3
D. Iodine
Ans: A

Q. A HIV patient develops lesion on skin his sex partner has similar lesions too which of following Skin CA associated with HIV?
A- Lymphoma
B- Kaposi sarcoma
C- Lymphogranuloma verenum
D- Burkit lymphoma
Ans: B

Q. A small child had exchange transfusion as HB was decreased after that slowly his ear became red then trunk then whole body also he bad diarrhea jaundice and deranged LFTs he is having:
A- Hypersensitivity
B- Graft vs Host disease
C- Acute transfusion reaction
D- Delayed response
E- Septic shock
Ans: B

Explanation:

- Hyper acute Rejection – Pre formed antibodies (Type 2 Hypersensitivity)
- Acute Rejection – CD8 Cells (Type 4 Hypersensitivity)
- Chronic Rejection – CD4 Cells (Type 2+4 Hypersensitivity)
- Graft vs Host Disease – Type 4 Hypersensitivity and Present with Diarrhea

Q. T3 T4 raised in pregnancy due to:
a. Increase TBG
b. Increase TSH
c. Increase TRH
Ans: A

Q. Differentiation between endogenous and exogenous insulin by:
Ans: C Peptide

Q. Sweat and piloerector muscles supplied by cholinergic postganglionic sympathetic:

Adenocarcinoma colon risk factor
High fat diet
Female inc fat intake = Breast
Male inc intake of fats = Prostate
Followed by colon for both

Q. Which of the following pituitary hormone is a natural opioid peptide?
A- Melanocyte stimulating factor
B- Thyroid stimulating factor
C- Endorphin
D- ACTH
E- Growth hormone
Ans: C

Q. Patient presents with pain in lumbar region. Stone at pelvicoureteric junction pain arising from which segment?
A- T11 – L1
B- L1 – L4
C- T12 – L2
D- T11 – L2

E- T11
Ans: C
Young female with short stature, primary amenorrhea, clinically diagnosed as having Turner syndrome, but buccal mucosa smear shows single bar body on FEW cells turner mosaic.

Q. 60 years old man, hearing loss, inc. Cortical density. Calcium normal, alp raised:
A. Ewing sarcoma
B. Osteosarcoma
C. Metastatic ductal ca breast
Ans: B

Q. Patient of HIV with URTI what mechanism of action of drug given in this case?
A. DNA inhibitor
B. Folic acid inhibitor
C. Protein inhibitor
Ans: B

Q. Increased airway resistance causes increase in:
Ans: Residual volume

Q. Characteristic of transitional epithelium:
Ans: Dome shaped cells

Q. Which acts through phospholipase c mechanism?
A. Growth hormone
B. TSH
C. Glucagon
D. Oxytocin
Ans: ?

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Pathology November – 2021

Q. Patient with hand foot swelling mcv 68 ferritin 400, iron 5 microg, tibc 20 microg bm biopsy show extracellular iron?
A. Sideroblastic anemia
B. Anemia of chronic disease
C. Thalasemia trait
Ans: ?

Q. Female pale lethargic do not take any antenatal care, during delivery she bleeded heavily which nutrient deficiency?
A. Vit K
B. Iron
C. Calcium
D. B12
Ans: B

Q. Some candidates recall this MCQ as. Female with prior history of bleeding now had delivery during which she suffered postpartum hemorrhage. Which vitamin will be deficient in both mother and neonate?
Ans: In this case go for "Vitamin K".

Q. Investigation for Hashimotos thyroiditis:
A- Anti thyroglobulin & anti microsomal
B- Anti T3
C- TFTs
D- Anti Thyroglobin
E- Anti RNA
Ans: A

Q. A patient swelling in neck, bilateral exophthalmos and antithyroid antibodies present likely due to:
A- Graves disease
B- Hashimotos
C- Goiter
D- Thyrotoxicosis
Ans: A

Q. 29 yo went to remote area and developed mild watery diarrhea for over 1 week with no occult blood. Diarrhea resolved after 2 weeks. Which of the following could be the cause?
A. Amoeba
B. Shigella
C. Vibrio
D. Rota
Ans. A

Q. A 38-year-old man started vomiting 2 hours after attending a wedding. He also had abdominal pain, watery dirrhea and projectile vomiting. O/E

there was abdominal tenderness pulse 110/min BP 90/60mmHG. What could likely be the diagnosis?

A. Coli
B. Klebsiella
C. Staph arueus
D. Listeria

Ans: ?

Q. A 3-year-old child with history of recent travel presents with extremely watery diarrhea with utp 20-25 episodes per day. Mild abdominal pain and low grade fever. O/E he is dehydrated and on stool microscopy an organism with shooting star motility is seen. What media can this organism be grown on?

A. Colourless on EMB agar
B. Green colonies on blood agar
C. Red colonies on XLD agar
D. Yellow colonies on TCBS agar

Ans. D (Vibrio cholera shows yellow colonies on TCBS agar and colourless colonies on MacConkey's agar)

Q. A person went to Thailand and presented with diarrhea which is watery and large in amount, in stool sample donut shaped cysts were found. Cause is:

A- Cryptosporidium
B- Cystocercosis
C- Ameoba
D- Staph Aureus
E- Histoplasmosis

Ans: A

Explanation:

Diarrhea in AIDS – Cryptospordium
Meningitis in AIDS – Cryptococus

Q. In autoimmune diseases of thyroid antibodies are directed against:

A. TSH
B. Thyroglobulin
C. Follicular cells
D. C cells

Ans: B

Q. A middle aged man came back from Cairo & developed painless hematuria… Likely diagnosis is?

a. Squamous cell carcinoma of the urinary bladder by shistosoma hematobium
b. Transitional cell carcinoma of the urinary bladder
c. Transitional cell carcinoma of the prostate
d. Squamous cell carcinoma of the urinary bladder by shistosoma mansoni

Ans: A (Cairo is the capital of Egypt and is endemic for schistosoma hematobium which causes SCC of the urinary bladder)

Q. In Diphtheria vaccine which type of hypersensitivity occurs?

A- Type 2
B- Type 3
C- Type 4
D- Type 1
E- Type 2+4

Ans: B

Q. Women has tooth extraction & she was prescribed calcium, multivitamins & antibiotic. She was already on candesartan. candesatran effects efficacy of which antibiotic?

A- Metronidazole
B- Amoxicillin
C- Ciprofloxacin
D- Erythrocin
E- Oxytetracyclin

Ans: E

Q. Woman with heavy menstrual bleeding now becomes pregnant and delivers a baby at full term. Both mother and baby will have deficiency of?

A. Vit. K
B. Iron
C. Magnesium
D. Niacin

Ans: A

Q. A newborn baby is noted to have a left unilateral cleft lip. There are no abnormalities of the baby's palate. Which of the following developmental defects accounts for this occurrence?

A- Failure of the left lateral palatine process to fuse with the median palatine process
B- Failure of the left maxillary prominence to unite with the left medial nasal prominence
C- Failure of the right and left medial nasal prominences to merge
D- Failure of the left maxillary process to fuse with the left medial nasal process

Ans: D

Explanation:
Mid line cleft lip is failure of fusion of two medial nasal processes.
Unilateral cleft lip failure of fusion of median nasal process with maxillary process.
Cleft palate failure of fusion of lateral palatine process nasal septum and median palatine process.

Q. 25-year-old girl presented with lower abdominal pain. She is suspected of having abdominal pelvic mass upto umbilicus. Chest metastasis is also found which tumor maker is likely raised?

A- CA 19-9
B- CA 15-3
C- CA 125
D- AFP
E- Beta HCG

Ans: C (Ovarian CA)

Q. Female has ovarian tumor inhibin positive:

A. Granulosa cell tumor
B. Sertoli cell tumor
C. Embryonal cell tmr

Ans: A

Q. About synchondrosis what is true?

A- Joint cavity is present
B- Bone ends are covered by hyaline cartilage
C- Synovial joint
D- Cover by periosteum
E- Connective tissue between two bones

Ans: B

Also know:
Joint btwn vertebral bodies
Symphysis

Q. Type 1 hyperlipidemia underlying pathology:

A. Lipoprotein lipase deficiency
B. LDL receptor defect
C. Pancreatitis
D. Overproduction of VLDL

Ans. A

Q. In a man diagnosed with Hodgkin's lymphoma reed Sternberg cells are seen along with inguinal lymphadenopathy bilaterally and spleen is involved. Which stage of Hodgkin's lymphoma is this:

A. Stage 1
B. Stage 2
C. Stage 3A
D. Stage 3B
E. Stage 4

Ans. C

Remember:
A = No B symptoms
B = Presence of B symptoms like weight loss, night sweats, fever

Q. Due to which gene fusion in philladelphia chromosome causes CML?

A. Bcr abl
B. C-myc nd abl
C. N-myc and abl
D. Cmyc

Ans: A

Q. A patient with metastatic bone tumour and CBC with slightly low hb, normal plt, wbc 20, myelocyte, metamyelocyte, nRBCs present?

A. Leukoerythroblastic picture
B. Myelophthisic picture

Ans: A

Leukoerythroblastic reaction (LER) is characterized by the presence of immature erythroid cells and myeloid precursors (metamyelocytes, myelocytes, promyelocytes, myeloblasts, and blasts) as well as, exclusively in myelofibrotic disorders, teardrop cells in the peripheral blood

Q. A patient who was recently diagnosed with typhoid has history of fever for past 4 days, which test will you do?

A- Blood culture
B- Urine culture
C- Stool culture
D- Bone marrow examination
E- Widal test

Ans: A

Explanation:
BASU
Blood culture – 1st week
Agglutination test (Widal Test) – 2nd week
Stool culture – 3rd week
Urine culture – 4th week

Q. Which hormone produce by corpus luteum?

A- Progesterone
B- Estrogen
C- Estrogen, progesterone and inhibin

D- Estrogen, progesterone
E- Cortisol and Estrogen
Ans: C
Explanation:
Corpus luteum secrete – Progesterone, Estrogen and Inhibin
Corpus luteum secrete to maintain Pregnancy – Progesterone

Q. Frank starling theory, force of contraction depends upon:
A. Change in length of ventricular muscle fiber
B. Increase calcium influx
C. Increase force of contraction
Ans. A
Ans. (B) Apocrine sweat glands
- Sweat glands are of 2 types: eccrine (most abundant) and apocrine (limited sites)
- Eccrine glands produce watery secretions and are most common on the palm and sole. Their ducts open directly on the surface of the skin.
- Apocrine glands produce viscous secretions as they open in the duct of sebaceous glands and very rarely on the surface directly.
- Apocrine glands are found in the axilla (among eccrine variety), around nipple and genital area, also in the vicinity of anal opening.
- Ceruminous(wax) glands of external ear are modified apocrine variety of sweat glands

Q. Most common opportunistic infection after kidney transplant that because rejection is:
A- EBV
B- HSV
C- Polyoma
D- HIV
E- HPV
Ans: C

Q. Bilateral nerve lesion causes death:
A- Abducent
B- Vagus
C- Glossophryngeal
D- Trigeminal
Ans: B

Q. Artery palpated between trachea and infrahyoid is:
A- Internal carotid
B- Common carotid
C- Internal jugular vein
D- External Carotid
Ans: B

Q. Spores are best killed by:
A. Absolute ethyl alcohol
B. Hydrogen peroxide
C. Dry heat for 1 minute @ 100°
D. Moist heat for 10 min @ 150°
Ans: B
Explanation:
The following two are also correct
Moist heat at 121 C for 15 minutes and 15 psi pressure
Dry heat for 2 hours at 160 C

Q. Friedwald formula is used to determine percentage of:
A. HDL cholesterol
B. LDL cholesterol
C. Total cholesterol
D. VLDL cholesterol
Ans. B

Q. N-Myc mutation is seen in:
A- Neuroblastoma
B- Nephroblastoma
C- Wilms Tumor
D- Retinoblastoma
E- Glioblastoma
Ans: A

Q. Most common source of gram negative bacteremia in hospitalized pt is due to:
A. Indwellng urinary catheter
B. Pneumonia
C. IV canula
Ans: A

Q. 11 : 22 translocation is seen in which soft tissue tumor?
A. Ewing sarcoma
B. Rhabdomyosarcoma
Ans: A

Q. Hallmark of vitamin. B12 deficiency is:
A. Peripheral neuropathy.
B. Hyper segmented neutrophil
C. Macrocytic anemia
D. Megaloblastic.
Ans: B

Q. A 30-year-old woman presented with recurrent Hx of nosebleeds and heavy menses. Her father also had Hx of

prolonged nosebleeds. Labs with increased aPTT, normal PT, increased bleeding time. Ristocetin cofactor was abnormal. What is the likely diagnosis?

A. vWD disorder
B. Structure which have all 3 smooth muscle layers
C. Fundus of stomach.
D. Esophagus
E. Duodenum
F. Jejunum

Ans: A

Q. After vasectomy seminal fluid will contain:

A- Seminal and prostatic fluid
B- Prostatic fluid
C- Sperm count decrease
D- Prostatic fluid and sperm only

Ans: A

Q. On microscopy a structure is seen with partially ciliated and non ciliated columnar epithelium simple tubular glands with sub epithelial cluster of cells and three layers of smooth muscle?

A. Fallopian tube
B. Uterus
C. Ureter
D. Ovary

Ans: B

Q. Thoracolumbar outflow:

A. Sympathetic
B. Parasympathetic
C. Autonomic

Ans: A

Craniosacral is parasympathetic

Q. Most common cause of nosocomial (hospital acquired pneumonia) is:

A- S. aureus
B- S. Pneumonea
C- Klebsiella
D- H. influenza
E- Pseudomonas

Ans: A

Q. Lymphatic drainage of external nose is which of following lymph nodes?

A- Submandibular Lymph Nodes
B- Deep cervical lymph nodes
C- Retropharyngeal Lymph nodes
D- Occipital Lymph Nodes
E- Paraaortic Lymph Nodes

Ans: A

Explanation:

External nose & Anterior nasal cavity drained by submandibular lymph nodes
Posterior Nasal cavity drained by retropharyngeal lymph nodes & JD nodes.

Q. A scenario of MRSA for taking samples of hospital staff. What will be the site of sample taking?

A. Throat swab
B. Anterior nares
C. Blood culture

Ans: B

Q. Epithelium of vocal cords?

A. Stratified squamous
B. Pseudostartified ciliated coloumnar

Ans: A

Q. Purpose of sterilization strips:

A. Indicate sterilization efficacy
B. Indicate a certain temp has been achieved

Ans: A>B

Q. Patient is a case of ITP given IVIG what is the mechanism of action of IVIG?

A. Competitively binds to receptors on macrophages
B. FC receptor binding
C. Inhibit t-lymphocytes
D. Inhabit B cells to produce antibody

Ans: B

Q. Stain used for epithelial tumors:

A. Cytokeratin

Cytokeratin – Carcinoma (Epithelial)
Vimentin – Sarcoma (Mesenchymal)
Desmin – Muscle

Q. A 30-year-old male died suddenly after a rise in blood pressure. On autopsy the ruptured vessel completely lacked the tunica intima at the point of the aneurysm. The most likely type of aneurysm is?

A. Dissecting aneurysm
B. Berry anurysm
C. Marfan aneurysm

Ans: A

Tunica intima = dissecting aneuryism
Tunica media = berry aneurysm.

Q. Councilman bodies occur in process of:

A- Hypertrophy
B- Apoptosis
C- Atrophy
D- Yellow fever
E- Necrosis
Ans: B
Explanation:
Occur in process of Apoptosis
Seen in disease – Yellow fever

Q. An acanthosis which layer of oral mucosa is involved?
A- Basal
B- Cornium
C- Spinosum
D- Granulosum
E- Superficialis
Ans: C

Q. An 8-year-old reported with high grade fever of abruptonset accompanied with chills and severe headache. The history revealed nausae, vomiting and abdominal pain episodes since one week. Hepatomegaly and splenomegaly were found on examination. The blood stained with GIEMA STAIN identified the species involved. The most likely species involved is:
a) leishmania
b) P. falciparum
c) P. malariae
d) P. Ovale
e) P. Vivax
Ans: B

Q. A patient from Sibbi Balochistan presented with history if fever and fly bite. Examination showed non ulcerating nodule on the dorsum of hand along with hepatosplenomegaly and lymphadenopathy. Giemsa stain of splenic aspirate will show LD bodies justice in medical ethics:
A. Equity
B. refusing to content
C. No harm
Ans: A

Q. Low grade follicular lymphoma translocation is which of these?
A- T14:18
B- T9:22
C- T15:27
D- T8:21
E- T8:14
Ans: A
Explanation:
AML – 8:21 and 15:17
CML – 9:22
Burkit Lymphoma – 8:14
Mantle Cell Lymphoma – 11:14
Follicular Lymphoma – 14:18
Ewing Sarcoma – 11:22
Prostatic Carcinoma – 7:21 and 17:21

Q. PAS +ve in which organism?
A. Options included
B. Rickettsia,
C. spirochete
D. fungi
E. Amoeba
Ans: D (trephorema whippeli a bacterium causing whipple's disease is also PAS positive)
Also know:
PAS positive bacteria: **B cereus, Corynebacterium diphtheriae, Propionibacterium acnes, Klebsiella pneumoniae, and Micrococcus luteus**.

Q. Sesamoid cartilage is present in:
A- Acetubulum
B- Epiglottis
C- External auditory canal
D- Knee
E- Alae of the nose
Ans: E (If ala of nose not in option then go for larynx)
Explanation:
Hyaline cartilage – Larynx + articular surfaces of Synovial joints + Trachea
Elastic cartilage – Ear pinna
Sesamoid cartilage – Ala of nose > Larynx

Q. Tyre factory workers exposed aromatic amines and aniline dyes develop:
A- Adenocarcinoma
B- Squamous cell carcinoma
C- Transitional cell carcinoma
D- Small cell carcinoma
E- Bronchogenic carcinoma
Ans: C
Explanation:
Plastic factory worker – Liver angiosarcoma

Plastic factory worker + Smoking – lung CA > Angiosarcoma
Hydrocarbon (Tyre factory) + aromatic amines – Bladder CA
Smoking + hydrocarbon – Lung CA > bladder
Liver CA – Acohol >Aflatoxin > Smoking
Transitional bladder CA – Smoking >Amines > hydrocarbon
Squamous Cell Bladder CA – Schistostoma >Stones > Indwelling
Aromatic amines and azo dyes widely used in Aniline dye these include
2-Naphthylamine, Benzidine and 2-Acetylaminofluorene so All aromatic amines used in Aniline dye so best ans is Aniline dye

Q. CSF parameter comparable with plasma is:
A- Low WBC count
B- High glucose
C- Low Erythrocyte level
D- Protein
Ans: D

Q. Pt. having lobar pneumonia, how to diagnose it?
A. Sputum culture
B. AFB
C. Blood culture
D. Stain for sputum
Ans. A

Q. A patient presented with sore throat, fever, lymphadenopathy. His monospot test was positive. Blood shows atypical leukocytosis. The causative virus for this a picture is:
A. EBV
B. CMV
Ans: A (infectious mononucleosis)

Q. A group of mice was taken and injection of plastic hydrocarbon was given this will work as initiator in process the initiator work as:
A- Slow process will take time
B- Memory produce
C- It is last step in ccarcinogensis
D- Cause Clonal proliferation
Ans: B (Robins)

Explanation:
Initiators – All initiating chemical carcinogens are highly reactive electrophiles (have electron-deficient atoms) that can react with nucleophilic (electron-rich) sites in the cell. Their targets are DNA, RNA, and Protein. They cause permanent DNA damage and are **rapid irreversible and has memory**
Promoters- They don't have direct effect on DNA and cause Clonal proliferation of already iniatiated cells. They are **reversible**.

Q. Pericardiocentesis location for straw colored fluid is which of following?
A- Caudal sternum region at medial end of 4th and 5th costal cartilage
B- Left parasternal 3rd intercostal space
C- Midclavicular line
D- Midaxial line
E- Right parasternal 2nd Intercostal space
Ans: A

Q. Which of the following is mediator of fever?
A- IL-1
B- Prostaglandin
C- Histamine
D- C3b
E- C3a
Ans: A

Explanation:
Pain – Bradykinin > Prostaglandins E2
IL-1 and TNF – Fever mediator
Prostaglandins F2, E2 and D2 – Vasodilation

Q. A 50-year-old radiographer persented with pallor, recurrent infection and epistaxis. Most likely diagnosis:
A. Leukemia
B. Aplastic anemia
C. Sickle cell anemia
Ans: A
Age of the patient.
Radiation exposure common cuase of leukemia rather than aplastic anema.

Q. With exception of sweat glands, parasympathetic system cause what?
A- Dec secretions
B- Promote secretions
C- Increase HR
D- Decrease peristalsis
Ans: B

Q. Chylomicrons are present in which part of liver?
A. Space of disse
B. Portal triad
C. Porta hepatis

D. Sinusoids

Ans: A

Q. In terms of the lab findings, which of the following would most likely indicate disseminated intravascular coagulation?

PC – platelet count, BT - bleeding time, PT – thrombin time, PTT – prothrombin time:

A

Decreased PC, Increased BT, PT, PTT

B

Decreased PC, BT, Increased PT, PTT

C

Decreased PC, Increased BT, PT, Decreased PTT

D

Increased PC, BT, Decreased PT, PTT

A

Also know:

Q. Most Sensitive Test for DIC is:

D dimers

Most Specific Test for DIC is:

Fdp

Q. A 55-year-old man with Mediterranean ancestry presents with jaundice and hemoglobinuria. He also reports being unusually tired and believes this may be due to his recent recovery from malaria during which he took primaquine. He was found to be anemic with a hemoglobin of 9 g/dL. His peripheral blood smear revealed bite cells and Heinz bodies. His hemolysis will be aggravated if he is given:

A. Sulphonamides
B. Paracetamol
C. Brufen
D. Motilium

Ans. A (G6PD deficiency)

Q. Child on antimalarial, Lfts deranged with increase unconjugated Bilirubin:

A- G6PD deficiency
B- Black water fever
C- Falciparum

Ans: A

Q. In sickle cell anemia, RBCs are spherical shaped, it is due to defect in:

A- Cytoskeleton
B- Blood vessels
C- Spleen
D- Integral proteins

Ans: A

Q. Best monitoring after giving thyroxine to hypothyroid person:

A. 1 t3
B. 2 tsh
C. 3 t4
D. 4 tsh plus t3 t4

Ans: B

Q. Regarding adaptation of cold receptors:

Rapidly adapting

Also know:

Krause receptors are cold receptors

Fibers for cold are A delta

Q. A Patient came in ER with BP 160/100 having headache, fatigue and palpitation lab reveals low potassium level. What is likely cause of this condition?

A- MI
B- Hyperaldosteronism
C- Hypoaldosteronism
D- Addison Disease

Ans: B

Q. A 17-year boy is brought to the hospital, in an altered sensorium. He is taking slow, shallow breaths and His breath has a fruity smell. An ABG: pH=7.20, urine ketones +ve. What is the most likely cause?

A- HONK
B- DKA
C- Septic

D- RTA
Ans. B

Q. Fasting glucose which require further inveatigation?

A. 10.2 mic mol
B. 6.7 mic mol
C. 4.5 mic mol
D. 5.8 mic mol

Ans: B

Q. % of proteins in balanced diet:

A- 15-20%
B- 35-45%
C- 50-55%
D- 40-45%

Ans: A

Explanation:

Carbs/Proteins Give – 4kcal
Fats Give – 9kcal
Alcohol Give – 7kcal
Carbs Required – 50-60%
Fats Required – 25-35%
Proteins Required – 10-20%

Q. Dignostic test for diabetic nephropathy is:

A- Microalbunemia
B- Ketones
C- Serum Albumin
D- HBA1C

Ans: A

Q. DNA repair gene is important for pre-existing cancer. Which one is DNA repair gene?

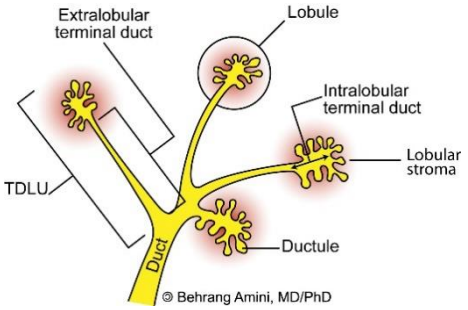
A- BCL2
B- BCLX
C- P53
D- KRAS

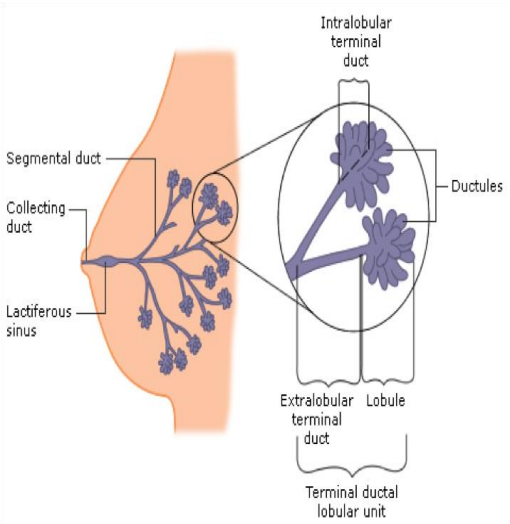
Ans: C

Q. A vague recall that stated "brest ki histology thi... from main duct divide to many branches into one?

A. Lactiferous duct
B. Unit lobule
C. Lobule"

I would go with TDLU (Terminal duct lobular unit" aka unit lobule). But please conceptualize yourself with the diagrams given below so that you may be able to pick the correct option any question similar to this comes in the exam.





Also know:

Q. Lobes of breast through many terminal ducts open into?

A- Lactiferous duct
B- Lactiferous sinus
C- Gland Lobule
D- Cooper ligament

Ans: A

Q. Most likely about mammary glands:

A- Extend vertically from 2 to 6 ribs
B- 15 to 20 lactiferous ducts
C- Sebaceous glands in areola
D- In pregnancy contains lactiferous ducts and secretory alveoli

Ans: B

Q. Hypothyroidism due to disease of thyroid gland is associated with increase plasma level of:

A. Cholesterol
B. Albumin
C. Reverse t3
D. Iodine

Ans: A

Q. A patient has anemia Raised MCV 110 he is also having difficulty in balance peripheral numbness and tingling sensation which type of anemia he is suffering from?

A- Magaloblastic anemia
B- Iron deficiency anemia
C- Thalassemia
D- Anemia of chronic disease
E- Sideroblastic anemia

Ans: A

Explanation:

B12 deficiency cause megaloblastic anemia which is related to Neurological sign of DCML and Balance problem.

Q. A known patient of gout using drugs for 8 to 9 months presents with HB: 6g/dl, low WBC and platelet counts. Bone marrow biopsy shows hypercellular. The likely cause is?

A. Aplastic anemia
B. Anemia of chronic disease
C. Leukaemia
D. Iron deficiency anemia
E. Drug induced anemia

Ans: B

Q. A patient having pallor, fatigue and lethargy labs shows s ferritin normal range, TIBC low and serum iron less most suitable diagnose:

A- Thalassemia trait
B- Iron deficiency anemia
C- Hereditary spherocytosis
D- Thalassemia intermedia
E- Anemia of chronic disease

Ans: E

1) Microcytic anemia with low ferritin & high TIBC = Iron deficiency Anemia.
2) Microcytic anemia with high ferritin & low TIBC = Anemia of chronic disease.
3) Microcytic anemia with high serum iron = Sideroblastic anemia.
4) Microcytic anemia with normal iron studies = Thalassemia.

Q. Which method for long term preservation of organism?

A. Freeze at -20 degree
B. Ultralow temp with electric feezer
C. Liquid nitrogen
D. Lypholization
E. D > A

Ans: ?

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February – 2022

Q. A 9-month old baby fell from bed and got frontal ecchymosis his Hb is 5 platelets are 180000, 2 sisters are normal but brother died of profuse bleeding after circumcision which is the most appropriate test to rule out the cause:

A- Bleeding time
B- Platelet Count
C- aPTT
D- LFT
E- CBC

Ans: C (Look for APTT for Hemophilia)

Coagulation pathway and kinin system activated by?

Hageman factor

Don't confuse this with the following:

Q. Kininogen converts into bradykinin due to:

A. Hageman factor
B. Kallikren
C. Tissue plasminogen activator
D. ACE

Ans: B

Q. The type of Hodgkin's lymphoma with good prognosis?

Ans: Lymphocyte predominant

Remember: Nodular sclerosis type is the most common type

Q. Pencil Cells are seen in:

A. Iron deficiency anemia
B. Thlasamia
C. Sickle cell anemia
D. Aplastic anemia

Ans: A

Q. Heinz bodies and bite cells are seen in a patient who has dark coloured urine after eating fava beans, they are seen in:

A- Splenectomy
B- Sickle cell
C- Spherocytosis
D- G6PD

Ans: D

Explanation:

Heinz body and bite cells in – G6PD

Howel jowel bodies – Sickle cell and Splenectomy

Q. The primordial germ cells are derived from?

A- Ectoderm
B- Epiblast
C- Endoderm
D- Mesoderm
E- Neural crest cell

Ans: B

Explanation:

Epiblast >Ectoderm>Yolk sac endoderm

Q. Marked basophilia is a pathognomic feature and strong prognostic factor in:

Ans: CML (BCR ABL mutation)

Q. A female is of 36 weeks pregnant and having low AFP low estriol she is having:

A- NTD
B- Down syndrome
C- Edward syndrome
D- Klifenter syndrome
E- Marfan syndrome

Ans: B

Q. A female having postpartum hemorrhage during delivery of twins after that she can't lactate her babes even her desire to lactate, she also complain that she remain 6 month lethargic after delivery where is problem that she can't lactate?

A- Pidtuatry adenoma
B- Sheehan syndrome
C- Shemron syndrome
D- Pralacinoma

Ans: B

Q. Solution used for disinfection of endoscope:

Ans: 2% glutaraldehyde

Remember; if process asked:

Tyndilization

Q. Heating in steam at 100C for 20 minutes on 3 consecutive days:

A. Autoclaving
B. Pasteurization
C. Tyndilization
D. Steaming

Ans. Tyndilization > Insissipation

Q. Autoclaving:

A. Dry heat
B. High pressure steam
C. High temp

Ans: B

Q. Bone regeneration is done by:

A- Vit. C
B- Vit. D
C- PTH
D- None
Ans: A
Explanation:
Bone Dimineralization – PTH
Bone Minerlazation – Vit. D
Bone Remodeling Vitamin – Vit. C
Bone Remodeling – Osteoblast + Osteoclast

Q. Patient Present with gums hypertrophy and bleeding disorder with echymosis likely diagnose is:
A- Lymphoblastic anemia
B- Scurvy
C- Vitamin A toxicity
D- Megaloblastic Anemia
Ans: B
Remember:
Defieicny of vitamin C causes scurvy due to dec tensile strength
Hemoericardium occurs in scurbu
Scurvy causes subperiosteal hemorrhage > perifollicular hemorrhage

Q. Following should be taken to avoid peripheral neuropathy:
A- Vitamin B6
B- Vitamin B9
C- Riboflavin
D- Biotin
E- Pantothenic acid
Ans: A
Optic neuritis – B12 >B6
Peripheral neuritis – B1 >B6 >B12

Q. Pellagra is caused by deficiency of:
A- Thiamine
B- Niacin
C- Vitamin C
D- Vitamin B12
E- Vitamin B6
Ans: B

Q. Which substance can destroy myelin sheath?
Lead
what else cause neural tube defect beside folic acid:
Vit A toxicity

Q. 45-year-old woman having weight loss with Increase T3 T4 Decrease TSH most likely diagnose is:
A- Primary Hypothyroidism
B- Primary Hyperthyroidism
C- Secondary Hyperthyroidism
D- Tertiary Hyperthyroidism
E- Primary Hyperparathyroidism
Ans: B
In megacolon and hirschsprung's disease the defect is in ..
mucosa,
submucosa,
serosa,
muscularis mucosa
B
Hirschsprung disease (HD) is a congenital disorder characterized by the absence of ganglion cells (GC) at the Meissner's plexus (**submucosa**)

Q. Giardia case with pus in stool and blood, finding on stool examination?
Ans: Trophozoites (pear shaped)

Q. Mass of lymphoid tissues are covered with simple squamous epithelium is:
A- Palatine tonsil
B- Lingual tonsil
C- Payer patches
D- None
Ans: A
Explanation:
- ✓ Lymphoid Tissue and Simple **Cuboidal Epithelium – Payer patches**
- ✓ Lymphoid Tissue and Simple **Squamous Epithelium – Palatine Tonsil**

Q. A patient who is indulged in demolition of old buildings develops dyapnea recently. CXR shows diffuse interstitial fibrosis of lungs B/L on histology iron stainig of cell is positive most likely is:
A- Silicosis
B- Siderosis
C- Asbestosis
D- Anthrocosis
E- Coal worker pneumoconiosis
Ans: C (FA)

Q. Total gastrectomy causes:
A- Pernicious anemia
B- Iron deficiency anemia
C- Microcytic anemia
D- Sideroblastic
Ans: B
Explanation:

- After Gastrectomy most common anemia – Iron deficiency anemia.
- After Gastrectomy within 6 months – Iron deficiency
- After gastrectomy more than 6 months – megaloblastic anemia
- Gastrectomy can produce pernious anemia like symptoms but not actual pernious anemia as it is autoimmune.

Q. Crystal cell on urine R/E Organism?

Ecoli is closely associated with kidney stones
If not in options, go for proteus

Q. Non Pregnant lady with OGTT 122, after 1h 198 and after 2h 194 diagnoses:

A- Normal
B- DM
C- Gestational Diabetes
D- Impaired glucose tolerance

Ans: D

Q. At 52 years of age a woman was diagnosed with DM. Her family history for the disease is also positive. The pathophysiology is:

Ans: Increase resistance of cells to insulin

Q. 27 years old man presents with headache, fever, positive kernigs sign, CSF analysis shows increased lymphocytes, sugar = 40mg/dl, proteins = 60mg/dl, likely diagnosis:

A- Bacterial meningitis
B- Viral meningitis
C- Tuberculous meningitis
D- Fungal infection

Ans: C

Q. A Patient presented with headach, Neck stiffness and photophobia on LP glucose 40, Increase Protein 400mg/dl and lymphocytes 88% what is diagnose?

A- Bacterial meningitis
B- Viral meningitis
C- TB meningitis
D- HSV
E- Encephlitis

Ans: C

Q. A Patient presented with headache, Neck stiffness and photophobia on LP glucose 40, and Raised Neutrophils what is diagnose?

A- Pyogenic meningitis
B- Viral meningitis
C- TB meningitis
D- HSV
E- Encephlitis

Ans: A

Q. 27 years old man presents with headache, fever, positive kernigs sign, CSF analysis shows increased lymphocytes, sugar = Normal proteins = 60mg/dl, likely diagnosis:

A- Bacterial meningitis
B- Viral meningitis
C- Tuberculosis meningitis
D- Fungal infection

Ans: B

Q. BT reaction after 10 days:

A. Type 2
B. Graft versus host reaction
C. Both

Ans: A

Q. For a renal transplant patient where would you take the sample from for HLA matching?

Ans. Buccal mucosa > WBC > Blood

Q. Trigone of urinary bladder derived of which of following?

A- Endoderm
B- Mesoderm
C- Ectoderm
D- Neural crest cell
E- Neuroectoderm

Ans: B

Explanation:

- Bladder trigone from – Mesoderm
- Bladder transitional epithelium from – Endoderm

Q. ABGS of a patient shows PH = 7.5, PCO_2 = 20, HCO_3 = 20, PO_2 = 80, the likely diagnosis is:

A- Metabolic acidosis
B- Metabolic alkalosis
C- Uncompensated Respiratory alkalosis
D- Compensated metabolic alkalosis

Ans: C

Q. Trigone of urinary bladder developed from:

A. Urogenital sinus
B. Mesonephric duct

Ans: B

Breast carcinoma with 4 axillary lymph node... stage = 4

Q. 50 years old patient developed Chest pain for 3 hours, not relieved by nitrates, bp 110/70, pulse 100bpm, what's next best investigation to do?

A- CPK
B- CKMB
C- Trop T
D- CBC
E- LDH

Ans: B

Explanation:

- Best Initial Investigation of choice – ECG
- 1-2 hr – Myoglobin
- Within 4hr – CK MB
- After 4hr – Trop
- Sensitive – Trop T
- Specific – Trop I

Q. TdT positive is seen in:

Ans. ALL

Q. In hereditary spherocytosis defective protein is which of following?

A- Fibrillin
B- Titin
C- Dystrophin
D- Spectrin
E- Ankyrin

Ans: D

Q. In hereditary spherocytosis what is true?

A- Cytoskeleton deformity
B- Cartilage defect
C- Collagen defect
D- Cell defect

Ans: A

Q. Sexually active male with single genital lesion and uretheral discharge diagnosis?

A. Gonorrhea
B. chlamydia
C. A>B

If just penile ulcer: Chlamydia
If associated discharge: Gonorrhea

Q. A small child had exchange transfusion as HB was decreased after that slowly his ear became red then trunk then whole body, also he bad diarrhea jaundice and deranged LFTs he is having:

A- Hypersensitivity
B- Graft vs Host disease
C- Acute transfusion reaction
D- Delayed response
E- Septic shock

Ans: B

Explanation:

- Hyper acute Rejection – Pre formed antibodies (Type 2 Hypersensitivity)
- Acute Rejection – CD8 Cells (Type 4 Hypersensitivity)
- Chronic Rejection – CD4 Cells (Type 2+4 Hypersensitivity)
- Graft vs Host Disease – Type 4 Hypersensitivity and Present with Diarrhea

Q. Ventricle septum wall thicker than ventricle wall seen in:

A- Dilated cardiomyopathy
B- Restrictive cardiomyopathy
C- Hypertrophic cardiomyopathy
D- Cardiac tamponade

Ans: C (stroke volume will be decreased)

Drug of choice in hypertrophic obstructive cardio myopathy:

Beta blockers → 1st line✓
Verapamil and Diltiazem → 2nd line
Amiodrone → 3rd line

Q. Contraindicated:

A. Digoxin
B. Nifedipine
C. ACE inhibitors

Q. Most common carcinoma in males of Karachi:

A. Lungs
B. Mouth
C. Colon

Ans: B (due to paan)

Q. Which is calculated in acid base disorder?

Ans: H ion conc

Q. A 29-years-old female feeling lethargy and irritability for last 5 years prevents to you. Her Hb is 9.6, MCV 70, MCHC low, WBC and platelet count normal. Two months after taking iron supplements her Hb was 10.2. How will you confirm the cause of continuity of her anemia?

A- TIBC

B- Retic count
C- Bone marrow
D- Serum ferritin
E- HB Electrophoresis
Ans: E

Q. Visual cortex receives fibers from which of the following:
A. Medial geniculate body
B. Lateral geniculate body
Ans: B

MRSA will be detected via which antibiotic disk = **cefoxitin disk diffusion test**

Q. A patient present with HTN, palpitation and headache what will be the findings?
A- Increase cortisol
B- Increase Glucagon
C- VMA in urine
D- Increase Proteins
Ans: C

Q. Bronchogenic CA behind the root of left lung causes compression of which structure?
A- Phrenic nerve
B- Vagus nerve
C- Esophagus
D- Recurrent Laryngeal nerve
E- Aorta
Ans: E

Explanation:
- Azygous vein anterior to right root of lung
- Aorta posterior to left root lung
- Phrenic nerve anterior to root of lung
- Vagus nerve posterior to root of lung

Q. A patient with Short 4th, 5th metacarpal, associated with hypocalcaemia diagnose is:
A- Primary hyperparathyroidsm
B- Pseudohypoparathyroidism
C- Secondary hyperparathyroidism
D- Tertiary hyperparathyroidism
Ans: B (FA)

Explanation:

Pseudohypoparathyroidism 1A (Maternal)
Physical findings: Albright hereditary osteodystrophy (shortened 4th/5th digits, short stature, round face, subcutaneous calcifications, developmental delay)
Labs: Increase PTH, Decrease Ca2+, Increase PO4

Pseudopseudohypoparathyroidism (Paternal)
Physical findings: same as Albright hereditary Osteodystrophy
Labs: Normal PTH, Ca2+, PO4

Q. Which structure lie closest to crus cerebri?
A- Caudate
B- Globus Pallidus
C- Substantia Nigra
D- Pons
E- Colliculus
Ans: C

Q. Patient had asked to grip the card between the index finger and thumb which nerve injury is checked in this test?
A- Anterior interosessous
B- Posterior interosessous
C- Ulnar
D- Radial
Ans: A (Median nerve)

Q. Preservation of microorganisms in lab for long duration is done by:
A. Liquid nitrogen box
B. Freeze at -20 degrees
C. Lypholization
Ans. C>B

Q. PAS positive:
A. Bacteria
B. Fungi
C. Spirochetes
D. Viruses
Ans: B

Q. Appropriate test for growth hormone:
A- Fasting early morning GH
B- 2 hours Post prandial
C- Insulin stimulation test
D- Insulin suppression test
Ans: C

The first screening test for thyroid dysfunction is
A. T3
B. T4
C. TSH
D. Both T4 and TSH
Ans: C

Q. Axillary skin glands producing viscous secretion with odour are:
A) Eccrine sweat glands
B) Apocrine sweat glands
C) Mucous gland

D) Holocrine sebaceous glands
Ans: B
Q. T3 and T4 decreased & TSH is also Decreased:
A. Primary Hypothyroidism
B. Secondary Hyperthyroidism
C. Primary Hyperthyroidism
D. Secondary Hypothyroidism
Ans: D
Q. A patient presented to you with greenish, malodorous vaginal discharge. On microscopy, a motile pear shaped organism was identified. Dx?
A- Candida
B- Chlymydia
C- Trichomonas
D- Gonorrhea
Ans: C
Q. Tubular structure containing stratified squamous epithelium identified as vagina. What will be seen on microscopy/histology that differentiates it from other structures?
Ans: Lamina propria with elastic fibers. (histology of vagina)
Q. In a man diagnosed with Hodgkin's lymphoma reed Sternberg cells are seen along with inguinal lymphadenopathy bilaterally and spleen is involved. Which stage of Hodgkin's lymphoma is this:
F. Stage 1
G. Stage 2
H. Stage 3A
I. Stage 3B
J. Stage 4
Ans. C
Q. A 6-year-old child with history of joint swelling and bleeding during a circumcision. Raised aPTT. Which test should be done to confirm the diagnosis?
A- Factor V laden
B- Factor 9 assay
C- Factor 8 assay
D- PT
Ans: C
Q. Which of the following organism causes meningitis in neonates?
A- Streptococcus pneumonia
B- Staph Aureus
C- E. coli
D- H. influenza
Ans: C
Remember: Group B strep > E. coli
Q. PCT in comparison to DCT has:
A- Extensive brush border
B- Less convulated
C- Lumen made of cuboidal epithelium
D- Lack brush border
E- Thin membrane
Ans: A
Q. Aggregation of lymphoid tissue covered by stratified squamous epithelium is:
A- Thymus
B- Spleen
C- Palatine tonsils
D- Lymph node
E- Pharyngeal tonsils
Ans: C
Explanation:
Lymphoid tissue and simple cuboidal
Epithelium – Payer patches
Lymphoid tissue and stratified
Squamous epithelium – Palatine Tonsil
Q. Trypsinogen is activated to trypsin by:
A- Enteropeptidase
B- Carboxy peptidase
C- Aminopeptidase
D- Already secreted trypsin
Ans: A
Q. A newly married female with RIF pain TLC is 12000. With fever and vomit. Lmp is 3 weeks back. Dx?
A. Appendicitis
B. Salpingitis
C. Fibroid
D. Ectopic pregnancy
Ans: A
Q. Heart works as a syncytium because of:
A- Gap junctions
B- Intercalated disc
C- Tight Junction
D- Desmosomes
E- Autonomous
Ans: A
Q. Doc in pneumonia 60 years age man:
A. Ceftriaxone

B. Doxycycline
C. TMP-SMX

Ans: ?

Q. In upper GIT skeletal and smooth muscle junction is at:

A. Upper esophagus
B. Mid esophagus
C. Stomach
D. Duodenum

Ans: B

Q. Patient had Cough and X-ray shows hilar lymphadenopathy, non caseating granuloma present diagnose is:

A- Sarcoidosis
B- TB
C- Syphlis
D- Leprosy

Ans: A

Q. Most abundant cells in white matter of CNS are:

A- Microglia
B- Fibrous astrocytes
C- Oligodendrocytes
D- Protoplasmic astrocytes

Ans: C

Explanation:

- Oligodendrocytes and Astrocytes are both glial cells.
- Most Numerous Glial cell overall is Astrocytes
- Most numerous glial cells in White matter is Oligodendrocytes.
- Most Numerous Astrocyte in white matter is Fibrous Astrocyte
- Most Numerous Astrocyte in Gray matter is Protoplasmic Astrocyte

Q. Abductor of vocal cord is:

A. Posterior cricoarytenoid
B. Lateral aretenoids
C. Cricothyroid
D. Thyroaretenoid

Ans: A

Q. To differentiate liver disease from dic:

A. Fdp
B. Factor 8

Ans: A

Q. Emboli in venous circulation will lodge in:

A- Aorta
B- Lungs
C- Kidney
D- Heart

Ans: B

Explanation:

Emboli First go to – IVC >Right atrium
Emboli first loadge in – Pulmonary artery (Lung)

Q. Scenario with mesothelioma. Man was involved in ship building. Causative agent?

Ans: Asbestos

Q. Horse rider fall and scratches some days ago presented with lock jaw and spasm due to:

A- Tetanus toxin Decrease GABA
B- Toxin Release Acetyl choline
C- Hypokelmia with toxin
D- Toxin cause hyperkalemia

Ans: A

Q. A Patient having Bleeding tendency and diagnosed as VWD. which among the following test is used for diagnosis of VWB disease?

A- Increase PT
B- Increase BT
C- Decrease APTT
D- Increase FDP
E- Decrease PT

Ans: B

Explanation:

- Haemophilia: Raised APTT
- ITP: Raised BT
- VWD: Raised BT and APTT
- DIC: Raised PT, APTT, BT &FDP

Q. Patient is having rhinoinusitis and nasal polyp with the fungus invading lamina papyracea, excessive endothelial damage and having non septate hyphae organism involved is:

A- Candida
B- Histoplasmosis
C- Aspergillus
D- Mucor
E- Rhizopus

Ans: D (FA)

Explanation:

Mucor and Rhizopus

- Diabetic (DKA) and Neutropenic (Leukemia)
- Rhinosinusitis
- Non septate hyphae branch at wide angle

- Invade blood vessel

Aspergillus

- Non diabetic
- Immuno compromised and neutrophilic dysfunction (CGD)
- Rhinosinusitis
- Septate hyphae branch at acute angle

Candida

- Diamorphic
- Pseudohyphae

Cryptococus

- Not Diamorphic
- 5-10 um narrow budding
- Brain meningitis and Encephlitis (Soap bubble lesion) in immunocompromised

Histoplasmosis

Reticuloendothelial System involve

Q. What is the definition of reliability?

A- Extent to which it gives false result
B- Extent to which a procedure can give repeated results
C- Extent to which a procedure is still good as it started
D- Means reproducibility

Ans: B

Q. Information care session is for:

A- Take informed consent for the procedure the patient will undergo
B- Clear the myths and misconceptions of the patient and relatives about the disease
C- Tell the patient and family about new advances in treatment of the disease
D- Take information from the family and friends of the patient about the disease
E- Tell the patients about the facilities available to in the hospital for the treatment of the disease

Ans: B

Q. Confidentiality can be breached only:

A- If patient allows you
B- If friend allows
C- If parents visit doctor
D- If parents allow
E- In emergency

Ans: A

Q. A blood group has which antibodies?

A- Anti A antibodies
B- Anti B Anti bodies of IgG variety
C- Anti B anti bodies of IgM variety
D- Both Anti A & Anti B antibodies

Ans: C

Q. Hep B vaccinated status is shown by presence of:

Ans: Anti-HBs

Q. Carrier status for staph aureus is checked by taking sample from:

A. Pharynx
B. Hands
C. Finger Webs
D. Anterior nares

Ans: D

Q. A male has been diagnosing for colon cancer through CEA? Doctor does CEA for what?

A. For Site of malngcy
B. Size of malgnacy
C. To see matastasis
D. For Follow up of malangcy
E. To see treatment effects

Ans: D

Q. Loss of polarity and architecture is seen in:

A- Hyperplasia
B- Metaplasia
C- Hypertrophy
D- Dysplasia
E- Atrophy

Ans: D

Q. The early stage of Aschoff bodies contains:

A. Eosinophils
B. Fibrin degeneration
C. Fibrosis
D. Giant cells
E. Ischemic necrosis

Ans: B

Also know:

Q. Aschoff bodies in rheumatic heart disease show all except:

A. Anitschkow cells
B. Epitheliod cells
C. Giant cell
D. Fibrinoid necrosis

Ans: B

Q. In erythroblastosis fetalis which test perform:

A. Direct combs test
B. Indirect combs test

Ans: B

Q. Side effects of anti hyperlipidemic:

A- Nausea
B- Rash
C- GI disturbance
D- Sedation
Ans: C

Q. Which antibody is released in tears saliva and colostrum?
A. IgM
B. IgA
C. IgE
D. IgD
Ans: B

Q. In bones, canals entering the medullary cavity in transverse and oblique fashion:
A- Volkmann's canal
B- Haversian canal
C- Lacunar canal
Ans: A

Q. 2-year-old boy small multiple bone fractures and blue sclera mode of inheritance?
Ans. Autosomal dominant
(osteogenesis imperfect defect in type 1 collagen)

Q. Costal cartilage are bar of which of following cartilage?
A- Fibrocartilage
B- Synovial cartilage
C- Hyaline cartilage
D- Elastic cartilage
Ans: C

Q. Which have special characteristics from other family?
A- Osteoclast
B- Osteocyte
C- Osteoblast
D- Chondroblast
Ans: A

Q. A child with Sarcoma of thigh receives radiotherapy for after 1 year, he is at risk of developing the following complication:
B- Leukemia
C- Venous thrombosis
D- Infection
E- Inflammation
Ans: A

Explanation:
Acute effect of radiotherapy – Desquamation
Chronic effect of radiotherapy – Endarteritis obliterans

Q. Late effect of radiotherapy – Lymph proliferative disorder the most importnt stage of non proliferative background retinopathy in diabetes is:
A. Excessive haemorrahge
B. Macular edema
C. Microaneurysm
D. Multiple soft exudates
E. Neovascularisation
Ans: C

Also know:
Cotton wool spots – hypertensive retinopathy
Most important stage of proliferative DR – neovascularization

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Pathology MAY – 2022

Q. Major Source of energy for brain in compensates stage during 24 hr:

A- Fatty acids
B- Carbohydrates
C- Protein
D- Aminoacids
E- Ketone bodies

Ans: E

Don't confuse this with following MCQ:

Q. Metabolic fuel of brain is:

A- Glucose
B- Fructose
C- Fatty acid
D- Protein

Ans: A

Q. The metabolic fuel for liver in the post absorptive phase is:

A- Ketone bodies
B- Lactate
C- Fatty acids
D- Glucose

Ans: D

Q. Fatty acid combine with glycerol in which organelle?

A. Mitochondria
B. Golgi apparatus

Ans: B

Q. Earliest ocular manifestation of vitamin A deficiency?

A. Night blindness
B. Conjunctival xerosis

Ans: A

Q. In RHD, which earliest change occurs in formation of aschoff bodies:

A. Fibrinoid necrosis
B. Inflammation
C. Giant cells
D. Eosinophilia

Ans: A

Q. In MRSA outbreak the carrier status for staph aureus is checked by taking sample from:

A. Pharynx
B. Hands
C. Finger Webs
D. Anterior nares

Ans: D

Q. Esophagus histology show epithelium:

A. Covered by Cuboidal epithelium
B. Has squamous and smooth muscle
C. Has stratified squamous epithelium throughout
D. Has 3 layers of muscles
E. Esophageal opening acting as anatomical sphincter

Ans: C

Q. Lipofuscin is found in which of the following?

A. Brain
B. Skin and nails
C. Heart, liver, kidney
D. Thyroid and parathyroid

Ans. C

Q. Child has papules, rash starting from behind ear and spread to whole body most likely diagnose is?

A. Mumps
B. HSV
C. HPV
D. Measles
E. Polio

Ans: D

Q. 35 yr old man of average built gave history of attacks of sweating and weakness off and on and relieved by intake of sweet juices most useful investigation?

A. GTT
B. Insulin and c-peptide
C. Insulin curve with GTT
D. Plasma glucose after 2 hrs of meal
E. Plasma glucose fasting

Ans: B

Q. During a biopsy a nerve was damaged causing loss of sensation of ear lobule. Cutaneous nerve supply of Ear lobule is:

A. Maxillary nerve
B. Greater auricular nerve
C. Mandibular nerve
D. Accessory nerve

Ans: B

Q. The diffusing lung capacity is maximum in which of the following conditions?

A. CCF
B. Asthma
C. Fibrosis

D. Polycythemia

Ans: D

Q. Right atrium infarction involves which of following?

a. Septomarginal band
b. Moderator band
c. Pectinate muscle
d. Papillary muscle
e. Trabeculae

Ans: C

Q. Child sore throat greyish memebrane in throat.you suspect C diptheria. How will u best detect it:

A. Sputum Culture
B. Throat Culture
C. Sputum and Blood Culture

Ans: B (if option of "throat culture and blood culture" is present then choose that

Q. Most common type of hyperlipidemia:

A. Type 1
B. Type 2
C. Type 3
D. Type 4
E. Type 5

Ans. B (Type IIB is most common)

Q. A 45-year-old male has had a low-grade fever for over a month. He has malaise, but no other complaints. A physical examination reveals no significant findings. A urinalysis reveals that there are many WBC's in the urine, but routine bacterial cultures continue to be negative. What should be suspected?

A. Renal cell carcinoma
B. Renal tuberculosis
C. Renal infarction
D. Cystitis cystica
E. Renal vein thrombosis

Ans: B

Q. Most susceptible to ischemia:

A- Kidney
B- Liver
C- Neuron
D- Heart
E- Spleen

Ans: C

Q. Final wound strengthening by which type of collagen?

A- Collagen 3
B- Collagen 2
C- Collagen 1
D- Collagen 4
E- Collagen 5

Ans: C

Explanation:

Early wound healing + granulation tissue – Type 3 collagen

Late wound healing + wound strength – Type 1 collagen

Q. Bacterial resisitance to antibiotics is transferred by?

A. Conjugation
B. Translocation
C. Translation
D. Transposition

Ans: A

Q. A man presented with fever, rigors & and Pus in urine which is treated for 2 weeks is most likely suffering from:

A- UTI
B- Chronic Pyelonephritis
C- Acute Pyelonephritis
D- Appendicitis
E- Adenitis

Ans: C

Q. A child born with urine coming out from umbilicus Doctor diagnosed this as patent lumen of allantois which results in which of following?

A- Urachal fistula (Patent Urachus)
B- Urachal cyst
C- Urachal sinus
D- Extrophy of bladder
E- Atrophy of bladder

Ans: A

Q. Myelination of CNS is formed by:

A- Oligodendrocytes
B- Schwan cells
C- Astrocytes
D- Dendritic cells

Ans: A

Q. Most common cause of hospital aquired infections?

A. Indwelling catheters
B. Iv lines
C. Dusts
D. Respiratory droplets

Ans: A

Q. MI of posterolateral surface of heart.

Vessel involved?

A. Posterior ventricular artery
B. Posterior interventricular artery
C. Left circumflex

Ans: C

Q. Indirect action of parathyroid hormone is:

A. Conversation of 25 hydroxyls to 1,25 hydroxyl cholcalciferol
B. Ca reabsorption from kidney
C. Intestine ca absorbtion

Ans: C

Q. A patient with Low HB, macrocytic RBC and hypersigmented neutrophil with raised MCV likely. Diagnose is:

A- Iron deficiency anemia
B- Megaloblastic anemia
C- Thalasemia
D- Sideroblastic anemia

Ans: B

Q. Microscopic feature of malignant tumor:

A. Metastasis
B. Invasion
C. Pleomorphism

Ans: B

Microscopic → Invasion
Diagnostic → Metastasis

Q. Main feature of malignancy is:

A- Increase N/C ratio
B- Mitotic figure
C- Pleomorphism
D- Necrosis

Ans: C

Explanation:

For malignancy – Metastasis > Invasion of adjacent tissues > pleomorphism > increased N/C ratio
Grading – Nuclear differentiation / Degree of differentiation / Mitosis
Staging – Extent of spread / Lymph nodes involvement
Pre-malignant lesion – Pleomorphism Diagnostic
Pre-malignant condition – Increased N/C ratio Diagnostic
(Both questions were in the exam)

Q. 60year old man with painless testicular swelling with raised LDH. What is your diagnosis?

A- Teratoma
B- Choriostoma
C- Lymphoma
D- Mixed tumor
E- Granulosa cell tumor

Ans: C

Explanation:

Old Age + Painless testicular tumor + Raised LDH – Lymphoma
Younge Age + Painless testicular tumor + Raised LDH - Seminoma
Old Age + Painless testicular tumor + Mature Stem cells – Teratoma

Q. Strongest layer of Small intestine is:

A. Submucosa
B, Mucosa
C. Longitudinal
D. Circular

Ans: A

Q. A young boy presented with fever rash on elbow and generalized cervical lymphadenopathy with TLC of 7230, he also takes penciline for his fever what is suitable diagnose?

A- Infectious Mononucelosis
B- Malaria
C- CML
D- ALL
E- Mediterranian Fever

Ans: A

Q. Most common cause of nasopharyngeal carcinoma is:

A- CMV
B- EBV
C- HPV
D- HSV
E- Adenovirus

Ans: B

Explanation:

Nasopharyngeal CA – EBV
Oropharyngeal CA – HPV
Lung CA – CMV

Q. DEB test is positive in:

Ans: Fanconi anemia

Q. Pathogenesis of Myasthenia gravis defect will be in:

A- Acetylcholine receptors destroyed
B- Acetylecholine receptor increased
C- Acetlycholine Release more
D- Acetylecholine act on muscles
E- Acetylcholine receptor over stimulation

Ans: A

Explanation:
Myasthenia gravis – Antibodies' against postsynaptic voltage gated cannels cause damage to Acetylcholine Receptor
Diagnostic test – ACH receptor antibodies
Most accurate/confirmatory/gold standard – EMG
Initial drug for Myasthenia gravis – Neostigmine
DOC for maintained therapy – Pyridostigmine.
Physostigmine – Crosses BBB immediately and increase acetylcholine.
In Lambert eaten Syndrome – Antibodies are directed against Calcium channels

Q. Amnesia concerned with damage to:
A- Thalamic nucleus
B- Hippocampus
C- Hypothalamus
D- Midbrain
Ans: B

Q. Which of the following bacteria that grows at 42C?
A. Campylobacter
B. Gonococcus
C. Shigella
D. Coli
E. Salmonella
Ans. A
Campylobacter > Virbio (FA)

Q. A patient with complain of Pallor Body ache and fatigue. Labs reveal Hb 8mg/dl and RCT count 10:
A- Hemolytic anemia
B- Megaloblastic anemia
C- Iron deficiency anemia
D- Sideroblastic anemia
Ans: A

Q. Pregnant lady developed jaundice. Ast alt values given. Cause? No history of visit to endemic area was given:
A: Hep A virus
B: Hep E virus
C: Hep B
D: Hep C
Ans: A
Explanation:
As no history of visit to endemic area so no Hep E…Most common hepatitis in pregnancy>hep A
Most lethal is>>Hep E.

Q. A lady presented with jaundice having gall stones which of the following investigation will confirm the diagnosis?
A- CPK
B- Bilirubin
C- ALP
D- AST
E- ALT
Ans: C
Explanation:
Viral: ALT>AST
Drug: ALT
Alcohlic: AST>ALT
Non Alcohlic: ALT >AST
Non Alcohlic (Cirhosis or Fibrosis): AST>ALT
Cholestatis Plus bone disease: ALP Raised
Hepatobilliary: Both ALP and GGT Raised
Liver disease plus pregnancy: Check GGT always
Conjugated Hyper bilirubinemia
Billiary disease (Stones)
Dubin jonson
Rotor syndrome
Un conjugated Hyper bilirubinemia
Hemolysis
Newborn
Cirgler najar
Gilbert
Mixed Hyperbillirubinemia
Hepatitis
Cirhosis

Q. A patient histopathology report showing pleomorphism rete ridges loss of polarity and increased nuclear to cytoplasmic ratio what is diagnose?
A- Squamous cell carcinoma
B- Verrucous carcinoma
C- Teratoma
D- Adenocarcinoma
E- Bronchogenic carcinoma
Ans: B

Q. A young boy having mass in neck biopsy of lymph node shows effaces architecture atypical mononucleosis cell with bilobed nucleus and eosinophilia and CD 15 and CD 30 positive diagnose is:
A- Non Hodgkin lymphoma
B- Hodgkin lymphoma
C- T cell leukemia
D- Infectious mononucleosis

E- Burkit lymphoma
Ans: B
Explanation:
Reed Sternberg cell is variety of Hodgking lymphoma having Bilobe cell and CD 15 and CD 30 positive.

Q. Which genetic disease is most common?
A. X linked recessive
B. Autsomal dminant.
C. Multifactorial.
D. Autsomal recessive.
Ans. C

Q. Largest total cross sectional and surface area is of:
A. Artery
B. Arterioles
C. Capillaries
D. Venules
E. Veins
Ans: C
Smallest – Aorta

Q. A lady with 26 weeks' gestation has uterine height of 24 weeks. On sonography there are no fetal parts and shows snow storm appearance, Likely Diagnose is:
A- Choriocarcinoma
B- Complete mole
C- Partial mole
D- Down Syndrome
E- Edward Syndrome
Ans: B

Q. Patient with seizures is biting tongue, which nerve carries pain sensation:
A. Facial
B. Circa tympani
C. Hypoglossal
D. Lingual
Ans: D
Some candidates recall that "TASTE" sensation was asked instead of pain sensation, in that case please clear your concept with this MCQ:

Q. 72-year-old patient has history of tongue bite which one carry taste on the anterior 2/3rd of the tongue?
A- Lingual
B- Glossopharyngeal
C- Vagus
D- Hypoglossal
E- Chorda tympani
Ans: E
Explanation:
Anterior 2/3 general sensation – Lingual nerve
Anterior 2/3 Taste sensation – Chorda tympani
Posterior 1/3rd Taste sensation – Glossopharyngeal nerve
Posterior most part taste sensation – Vagus

Q. A women undergoes abdominal surgery 10 years ago now she is diagnosing with HCC thought to cause by Hep B. It is said that DNA and RNA viruses are oncogens which one of the following is caused by RNA virus:
A- EBV
B- HPV
C- HSV
D- T cell leukemia causing virus
E- Hep. E
Ans: D

Q. Viral cause of oropharyngeal CA:
A- CMV
B- EBV
C- HPV
Ans: B
Explanation:
Nasopharyngeal CA – EBV
Oropharyngeal CA – HPV
Lung CA – CMV

Q. Respiratory symptoms are characteristic of one of the following conditions:
A. Ascariasis
B. billharziasis
C. Cysticercosis
D. Fascioliasis
E. Giardiasis
Ans: A

Q. A child having cystic fibrosis developing recurrent chest infection and otitis media most likely associate findings:
A- Increase sweat chloride
B- Increase sodium
C- Decrease sweat chloride
D- Increase Blood Magnesium
Ans: A
(Remember: Cystic fibrosis results in bronchiectasis)

Q. HIV infected cells:
A. CD4 th1
B. CD4 th2
Ans: A

Q. Neuroendocrine response after surgery is due to?
A- Hemorrhage
B- Toxic stimuli
C- Starvation
D- Nociceptor afferent
E- Intubation
Ans: A

Q. A patient presented with clasp knife spasicity, Hyperreflexia and positive babinski sign due to lesion of:
A- LMN
B- UMN
C- Medulla
D- Pons
E- Midbrain
Ans: B

Q. Pituitary tumor invades which bone?
A- Frontal bone
B- Sphenoid body
C- Cribriform
D- Ethmoid
Ans: B

Q. A female with sign and symptoms of hyper prolactinoma was diagnosed with pituitary adenoma. The growth of this tumor anteriorly will compress which structure?
A- Cavernous sinus
B- Optic nerve
C- Optic chiasma
D- Optic tract
E- Trochlear nerve
Ans: B

Explanation:
Cavernous Sinus – Laterally
Sphenoid Air Sinus – Inferiorly
Optic Chiasm – Superiorly
Optic nerve – Anteriorly

In a question asked regarding histology of gland what was the ans?

Q. A gland has glandular acini with pseudostratified epithelium, smooth muscle, focal areas of calcification:
A. Submandibular gland
B. Prostate
C. breast
Ans: B
(calcified focal areas – prostate)

Q. Granuloma with asteroid bodies is a feature of:
A- Sarcoidosis
B- TB
C- Syphlis
D- Leprosy
Ans: A

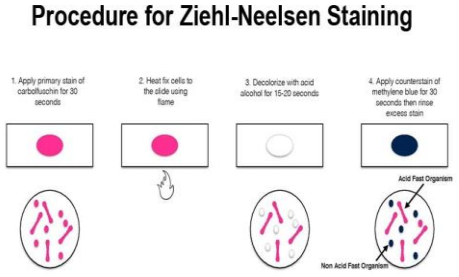
Q. 12 yrs old girl with skin abscess, causative organism is staph aureus over the past yr she has had several similar abscesses, as well as two bouts of aspergillisis most likely cause:
a. Defective Nadph oxidase
b. Thymic hypoplasia
c. IgA defeciancy
Ans: A (CGD)

Decrease sodium increase potassium occur in – Addison's disease

Q. After ovulation, primordial follicle ruptures, bleeds and becomes:
A. Corpus albicans
B. Corpus luteum of pregnancy
C. Corpus luteum of menstruation
D. Corpus hemorrhagicus
Ans. D

Q. While performing Ziehl Neelson staining, the pathologist forgot to add alcohol to sputum sample. What will happen now?
A. Bacteria in background looks blue
B. Bacteria in background looks red
C. Bacteria dewash on smear
D. Bacteria disappear on smear
Ans. B

Q. Please understand the concept with this diagram regarding ZN staining, so that you can attempt this question in any way it is asked:


Procedure for Ziehl-Neelsen Staining
1. Apply primary stain of carbolfuschin for 30 seconds
2. Heat fix cells to the slide using flame
3. Decolorize with acid alcohol for 15-20 seconds
4. Apply counterstain of methylene blue for 30 seconds then rinse excess stain
Acid Fast Organism
Non Acid Fast Organism

Q. Mother is RH positive fetus is RH negative father is also RH negative what is true?
A- Hemolytic reaction can occur
B- ABO incompatibility can occur
C- Transfusion reaction can occur
D- No risk of hemolytic reaction of newborn
E- Give Anti D antibody
Ans: D

Q. Emax of drug shows:
A- Potency
B- Efficacy
C- Bioavailability
D- Excretion
Ans: B

Q. Clara cells present in:
A- Bronchi
B- Primary Bronchioles
C- Terminal Bronchioles
D- Alveoli
Ans: C

Explanation:
Goblet cells up to bronchi and clara cells in terminal bronchioles.

Q. A female Patient present with fatigue, easy bruisibility after small cuts and recurrent infection alongside fever from 2 weeks. After investigations the report shows blast cells and Promyelocyte in smear. Suspected Diagnose is indicated by which translocation:
A- 9:22
B- 8:14
C- 11:14
D- 15:17
E- 14:18
Ans: D (Robins) – AML

Explanation:
AML – 8:21 and 15:17
CML – 9:22
Burkit Lymphoma – 8:14
Mantle Cell Lymphoma – 11:14
Follicular Lymphoma – 14:18
Ewing Sarcoma – 11:22
Prostatic Carcinoma – 7:21 and 17:21

Q. A 14-year-old boy eats fast food only, peripheral blood picture of macrocyte, diagnosis is:
A- Folic acid deficiency
B- Pernicious anemia
C- Iron deficiency anemia
D- Sideroblastic anemia
E- Thalassemia
Ans: A

Q. Most characteristic for infectious mono nucleosis?
A. B cells activated
B. T cells activated
Ans. B

Q. Post op wound having greenish pus discharge organism involved:
A- Staph Aureus
B- Pseudomonas
C- Actinomycetes
D- Streptocpcus
Ans: B

Q. 55years old male with past history of epigastric pain for which he was taking antacids was diagnosed as gastric lymphoma what is the most likely cause?
A- Drug induced gastritis
B- Ulcers
C- Intestinal metaplasia
D- Atopic gastritis
E- H. Pylori
Ans: E

Q. A scenario was given of a post cholecystectomy patient with heart rate of 48bpm and in all labs ONLY T3 was low. Diagnosis?
Ans. Sick euthyroid syndrome

Remember:
Sick euthyroid syndrome =T3 low and t4 and TSH normal
Primary overt hypothyroidism = low T4 and high TSH
Subclinical hypothyroidism = normal T3 and t4 but TSH is High
Central hypothyroidism =low t4 normal t3 and TSH

Q. Placenta attached but not penetrating through myometrium:
A- Accreta
B- Percreta
C- Increta
D- Previa
Ans: A

Q. A Patient of TB is on Att for 2 months.

Tb antibodies characteristic is:

A- Circulating in plasma
B- Bound to nucleus
C- Cell bound
D- Albumin bound

Ans: C

Q. Post splenectomy infection organisms:

A. Pneumococcus
B. Meningococcus
C. H. influenza
D. Encapsulated bacteria

Ans. A (all but prefer Pneumococcus > H. Influenza > Neisseria meningitides)

Q. An 85 years old patient underwent splenectomy after which he develops meningitis. Causative organism?

A. H.infuenza
B. Pneumococcal
C. Streptococcal
D. Staphylococcus

Ans. C

Q. Preservation of micro organism in lab for longest duration?

A. Liquid nitrogen box
B. Freeze at -20 degree
C. Repeated sub culture
D. Lypholization

Ans. D > B

Q. As horse shoe kidney ascend from pelvis during fetal development, it remains low because get trapped under:

A- Sup mesentric artery
B- Aorta
C- Inf mesentric artery
D- Celiac

Ans: C

Q. Hypokalemia and met acidosis – fluid loss from which segment?

A. Stomach
B. Duodenum
C. Jejunum
D. Ileum
E. Colon

Ans: e

Q. A 50year man presented with Hb 8.2, enlarge spleen. WBC raised. Peripheral smear showing Mature myeloid lineage. What is the genetic defect?

A- 9:22
B- 14:18
C- 11:14
D- 8:14

Ans: A

(CML – 9:22 translocation of BCR ABL gene i.e. Philadelphia chromosome
CPSP most favourite)

Q. Regarding vitamin D true is:

A- 25 hydroxylase in kidney 1 alpha hydroxylase in liver
B- 25 hydroxylase in liver 1 alpha hydroxylase in kidney
C- 25 hydroxylase in skin 1 alpha in kidney
D- 1,25 in Liver

Ans: B

Q. Brush border of PCT has:

A. Tightly packed cilia
B. Tightly packed filaments
C. Microvilli
D. Dense luminal membrane

Ans: C

Q. Which layer of epidermis makes new cells?

Ans. Stratum basalis

Q. Which one of the following hyperlipidemias is characterized by elevated plasma levels of chylomicrons and has no drug therapy available to lower the plasma lipoprotein levels?

A. Type I
B. Type II
C. Type III
D. Type IV
E. Type V

Ans: A

Q. On microscopy of lymph node, biopsy specimen, granuloma with caseous necrosis found for diagnosis of TB What should be looked for?

A- Coagulative Necrosis
B- Langhans Gaint Cells
C- Demonstration of AFB
D- Macrophage
E- Neutrophil

Ans: C

Q. Iron def anemia is characterized by:

A. Mcv low, mch low, mchc low
B. Mcv low mch high mchc high

Ans. A

Q. Male and female patient divided into

groups then subgroup which type of sampling it is?

A- Simple Random sampling
B- Stratified Random sampling
C- Mixed Sampling
D- Random Population

Ans: B

Q. True about agonist is:

A- They have affinity and efficacy
B- Only intrinsic activity
C- Bound by ionic bonding have prolonged effect
D- They have affinity and intrinsic activity

Ans: D

Q. Sore throat, fever, erythematous pharynx, tonsils enlarged, cervical lymph adenopathy, diagnosis:

A. Streptococcal infection
B. Leukemia
C. Lymphoma

Ans: A

Q. A patient with H/O of 3rd degree Severe burn causing damage to spinosum granulosum and basalis affect will be:

A- Pressure sensation
B- Temperature sensation
C- Pain sensation
D- Cutaneous water loss
E- Errector pillae loss

Ans: D

Q. In grade 3 carcinoma how many cells remain undifferentiated:

A- 5%
B- 25%
C- 50%
D- 75%
E- All

Ans: D

Q. Type of change in metaplasia is:

A- Polarity change
B- Irreversible change
C- Necrotic change
D- Functional and morphological change
E- Apoptotic

Ans: D

Q. Sterilization of endoscopic instruments by?

A. Soak in 2% glyceraldehyde
B. Chlorhexidine plus alcohol
C. Soap and water
D. Autoclaving

Ans: A

Q. Sodium and water regukation during dehydration is by:

A. Aldosterone
B. ADH

Ans: A

Q. ADH secretion can be stopped by:

A. Hemorrhage
B. Stress
C. Dec. osmolality

Ans. C

Q. Immediate or emergency diagnosis of diphtheria bascilli is done by:

A. Gram staining
B. Exudate for culture it grow in loffler media
C. To see morphology in special stain

Ans: A

Q. Stain used for diagnosis of corynebacterium diphtheriae is____ Gram stain, methylene blue stain, albert stain, neisser stain, ponder stain (Albert stain > Gram stain)

Culture medium used for corynebacterium diphtheriae is _____ Tellurite > Loefller

Q. Integral proteins in cell membrane are joined to lipids of membrane by?

A) Covalent and Hydrophobic bonds
B) Covalent bonds
C) Ionic bonds
D) Hydrophobic bonds

Ans. D

Q. Difference between ICF and ECF:

A. Cl ions
B. Dec pH of ICF

Ans: B

Q. Autoclaving:

A. Dry heat
B. Steam under high pressure
C. Steam under low pressure
D. Increasing temp

Ans. B

Q. Site for liver biopsy:

A. 10th ICS mid axillary line
B. Ant abd throud rectus sheath
C. Below 12th rib
D. 12th space

Ans. A

Q. Patient had bruise on elbow, which

changed colour from yellow to brown. Pigment:

Ans: Lipofuscin

Q. Hemosidrin

Ans. B

Q. Blood transfusion reaction likely to occur when a person having blood group A+ is transfused with Blood group?

A) AB^+
B) A^+
C) A^-
D) O^-
E) O^+

Ans: A

Site of pericardiocentesis:

Sub-Xiphoid Approach → Left Sternocostal margin is the best and the most commonly used site.

OR

Para-Sternal Approach → Left 5th Intercostal Space just Lateral to the Sternum.

(only one will be present in options, both are correct)

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August – 2022

Q. Chylomicrons are present in which part of liver:

a) Space of disse
b) Portal triad
c) Porta hepatis
d) Sinusoids

Ans: ?

Q. Lubricin protein secreted in synovial joint by which cells?

a) Type A synoviocytes
b) Type B synoviocytes

Ans. B

Q. Type A synoviocytes are non-fixed cells that can phagocytose actively cell debris and wastes in the joint cavity, and possess an antigen-presenting ability. The type B cells, which are proper synoviocytes, are involved in production of specialized matrix constituents including hyaluronan, collagens and fibronectin for the intimal interstitium and synovial fluid.

Ans: In fat embolism fat globules are visualized by Frozen section with sudan stain. According to some recalls:

Q. Diagnostic for fat embolism?

a) Frozen section with silver stain
b) Permanent section with fat stain
c) Frozen section with fat stain
d) Permanent section with silver stain

Ans: C

Q. Cause of pyuria with persistent negative culture OR male presented with dysuria, culture -ve for gonorrhea but leukocytes +ve in urine. Which organism?

Ans. Both of these statements are indicative of "sterile pyuria".

Q. The causative organisms which could be responsible for this:

a) Chlamydia
b) Neisseria gonorrhea
c) TB

TB was in the options recalled by candidates, but past MCQs have come where either chlamydia or n. gonorrhea was the answer so keep that in mind.

Q. Some candidates also recall. Pt. has pyuria but negative urine culture for organisms this happens in all except:

a) Acute post streptococcal gn
b) Polycystic kidneys
c) Urine stored at room temp for long
d) Alkaline urine
e) Vesical calculus

Ans: A

Q. A 5 years old male child presented with epistaxis, gum bleeding and bleeding time more than 20 minutes and increased APTT most suitable diagnose is:

A- VWD
B- Hemophilia
C- Vitamin k deficiency
D- Vitamin c deficiency
E- Platelets defect

Ans: A

Explanation:

APTT raised only – Hemophilia
(Intrinsic Pathway)
APTT and BT raised – VWBD
(Intrinsic Pathway)
All 3 raised – DIC
Only BT raised – ITP (Low Platelets) or
Platelets Function Defect (Platelets
count normal)

Q. History of bleeding from umbilical stump in first week because:

A- Vitamin K deficiency
B- Factor XI deficiency
C- Factor Xll deficiency
D- Factor V deficiency

Ans: A

Q. A patient postoperative on long term antibiotics now presented with echymosis due to:

A- Low Platlets
B- Vitamin K deficiency
C- Vitamin C deficiency
D- Vitamin D deficiency

Ans: B

Q. Patient presented with epistaxis and menorrhagia labs showing BT 14 min, APTT 60 secs, PT 15 sec, PH normal. Diagnose:

A- ITP
B- Haemophillia
C- VWD
D- DIC

Ans: C

Q. Beta thalessemia most important for prenatal diagnosis?

a) Chorionic villus sampling
b) Amniocentesis

Ans. A

Q. Patient was having altered taste e microcytic hypochromic anemia, stool test showed eggs which organism is responsible?

A- Entamoeba histolytica
B- Ancylostoma duodenale
C- Trichurius trichuria
D- Loa Loa
E- Trichinella

Ans: B (FA)

Explanation:

Respiratory Symptoms – Ascaris
Fisherman with anemia + Echymosis
Vitamin C deficiency
Fisherman with anemia – B12
Deficiency – Diphyllobothrium
Microcytic anemia – Ankylostoma
Conjuctival swelling – Loa Loa
Rectal prolapse – Trichuris Trichura
Muscle (Myalgia) – Trichinella Spiralis

Q. Presence of increase light chain immunoglobulin in blood is a feature of:

A- Reactive amyloidosis
B- Hereditary amyloidosis
C- Localized amyloidosis
D- Systemic type amyloidosis
E- Vascular disease

Ans: D

Q. Heart and facial skeletal deformity, embryological defect in:

Ans: Lateral mesoderm

Q. Low grade follicular lymphoma translocation is which of these?

A- t14:18
B- t9:22
C- t15:27
D- t8:21
E- t8:14

Ans: A

Explanation:

AML – 8:21 and 15:17
CML – 9:22
Burkit Lymphoma – 8:14
Mantle Cell Lymphoma – 11:14

Follicular Lymphoma – 14:18
Ewing Sarcoma – 11:22
Prostatic Carcinoma – 7:21 and 17:21

Q. APKD gene on which chromosome:

a) 14
b) 15
c) 16
d) 18

Ans: C

Q. Don't confuse with this:

HLA gene on – Chromosome 6
Alpha thalassemia – Chromosome 16
Beta thalassemia – Chromosome 11

Q. All are associated with Down Syndrome except:

a) ASD
b) Alzheimer
c) AML
d) Hypothyroidism
e) Horse shoe shape kidney

Ans: E

Q. The 5 A's of Down syndrome:

a) Advanced maternal age
b) Atresia (duodenal)
c) Atrioventricular septal defect
d) Alzheimer disease (early onset)

Ans: AML/ALL

Q. 95% of cases due to meiotic nondisjunction, most commonly during meiosis I

4% of cases due to unbalanced Robertsonian translocation
Only 1% of cases are due to postfertilization mitotic error.
Increase Beta HCG and Inhibin
Decrease AFP, Estriol and PAPP-A
Increase nuchal translucency and hypoplastic nasal bone

Q. Which of the following thyroid function test shows subclinical hypothyroidism?

a) Normal T3, T4 with increased TSH
b) Low T3, T4 with normal TSH
c) Low T3, T4 with highTSH
d) Low T3, T4 with lowTSH

Ans: A

Q. Clostridium perferinges acts by:

a) Producing lecithinase,
b) Depleting atp,
c) Causing hypoxia

Ans: A

Q. Which bacteria is microaerophilic?

The options were not recalled for this MCQ.
Please memorize the following table so that you donot have any difficulty.

Obligate aerobes	Mycobacterium, meningococci, pseudomonas, Bordetella, Brucella, Bacillus cereus, Vibrio, Nocardia
Microaerophilic	Campylobacter, Heliobacter, Borrelia, T. pallidum
Obligate anerobes	Actinomyces, Bacteriodes, Clostridium
Canophilic	Brucella abortus, pneumococci, Gonococci

Q. 10-year-old boy presents with recurrent upper respiratory tract infections. History revealed that he also had complained of chronic diarrhea and Bronchiectasis Most appropriate test for diagnose?

A- CBC
B- Duodenal biopsy
C- Sputum culture
D- Sweat chloride test
E- Jujenal biopsy

Ans: D

Explanation:

Cystic fibrosis has recurrent respiratory infection, otitis media, diarrhea and bronchiectasis so sweat chloride test is done to diagnose cystic fibrosis.

Q. Healing of wound is done by which of following?

A- Microtubules
B- Microfilament
C- Cytokeratin
D- Microtubulin

Ans: B

Q. Brain tumor, immunohistopathology GFAP + tumor of which cells?

A- Dendric cells
B- Astrocytes
C- OligoDendrocytes
D- Schwan cell

Ans: B

Q. A patient has been taking anti-tuberculous therapy for MDR-TB. His drugs regimen contains 6 drugs. The

patient eventually develops difficulty in distinguishing red & green colours. Which of the following drugs is responsible for this effect?

A- Amiodrone
B- Pyrazinamide
C- Rifampicin
D- Ethambutol
E- Ciprofloxacin

Ans: D

Explanation:

Isoniazid – Peripheral neuropathy
Rifampicin – Orange Color urine
Ethambutol – Optic neuritis
Pyrazinamide – Hyperuricemia

Q. A young boy having mass in neck biopsy of lymph node shows effaces architecture atypical mononucleosis cell with bilobed nucleus and eosinophilia and CD 15 and CD 30 positive diagnose is:

A- Non Hodgkin lymphoma
B- Hodgkin lymphoma
C- T cell leukemia
D- Infectious mononucleosis
E- Burkit lymphoma

Ans: B

Explanation:

Reed Sternberg cell is variety of Hodgking lymphoma having bilobe cell and CD 15 and CD 30 positive.

Q. Gram negative bacteria are different from gram positive by?

Gram negative lack teichoic acid > Gram negative have a thin peptidoglycan layer

Parameter	Gram-positive bacteria	Gram-negative bacteria
Cell Wall	A single-layered, smooth cell wall	A double-layered, wavy cell-wall
Cell Wall thickness	The thickness of the cell wall is 20 to 80 nanometres	The thickness of the cell wall is 8 to 10 nanometres
Peptidoglycan Layer	It is a thick layer/ also can be multi-layered.	It is a thin layer/ often single-layered.
Teichoic acids	Teichoic acids are present.	Teichoic acids are not present.
Lipopolysaccharide	Lipopolysaccharide is not present.	Lipopolysaccharide is present.
Outer membrane	The outer membrane is not present.	The outer membrane is mostly present.
Lipid content	The Lipid content is very low.	The Lipid content is 20% to 30%.
Resistance to Antibiotic	These are very susceptible to antibiotics.	These are very resistant to antibiotics.

Q. Endotoxin are?

a) Protein
b) lipid...
c) Lipopolysacharide

Ans: C

According to some candidates LPS was not given in options, in that case go for lipids.

Q. In phenylketonuria phenylalanine is not converted to:

a) Tyrosine
b) Leucine
c) Cysteine
d) Isoleucine

Ans: A

Q. Bacteria adhere to cell through:

a) Teichoic acid
b) Pilli
c) Capsule

Ans. B

Q. Type of endocytosis that occur in lysosome:

a. Phagocytosis
b. Pinocytosis
c. Apoptosis
d. Cell lysis
e. Pseudopod mediated

Ans: A

Q. Mediator of chronic allergic rhinitis:

A. Histamine
B. Eosinophil

Ans: B

Acute histamine
Chronic eosinophil

Q. In mucosal changes in chronic rhinitis, which cells increase?

a) Mast cells
b) Lymphocytes
c) Goblet cells
d) Basophils

Ans: C

Also know:

Allergic rhinitis – Type 1 hypersensitivity

Q. Arthus reaction is an example of:

a) Type 1 HS
b) Type 2 HS
c) Type 3 HS

Ans: C

Q. In gigantism what is raised along with growth hormone?

a) FSH
b) TSH
c) ACTH
d) Somatomedin C

Ans: D

Q. A 35 years old male of average built gave the history of attacks of sweating and weakness off and on and relieved by intake of sweet juices. the most useful investigation for him is:

a. Glucose tolerance test
b. Insulin and C peptide assay
c. Insulin curve with GTT
d. Plasma glucose 2 hours after meal

Ans: B (insulinoma scenario)

Low C peptide – Hypoglycemia due to exogenous insulin

High C peptide – Insulinoma or Hypoglycemic drug

Q. A female patient 45 years of age presented to you with orthostatic hypotension, depression, pigmentation of buccal mucosa. She has decreased neutrophils. Increased lymphocytes and eosinophils. ACTH level is increased., there is also hyperkalemia and hyponatremia. Diagnosis?

a) Cushing's syndrome
b) Cushing's disease
c) Ectopic ACTH
d) Addison's disease

Ans. D

Q. A 25-year-old woman presents to the clinic for an annual check-up. He is otherwise healthy and has no significant concerns. Basic laboratory studies demonstrate a sodium level of 129 mg/dL and potassium level of 5.9 mg/dL. A physical examination demonstrates hyperpigmentation of the oral mucosa. Review of systems were positive for generalized fatigue, 5-lbs unintentional weight loss, orthostatic hypotension and some headaches. What could be the diagnosis?

a) Cushing's disease
b) Conn's syndrome
c) Addison's disease

Ans. C

Q. Cardiac symptom by thyroxine occur due to?

Action on beta receptors

(Beta 1 receptors are present on heart)

Q. An old woman with multiple fractures has hypertension and is on dialysis. reason of fracture:

a. Hyperparathyroidism
b. Vit. D deficiency

Ans: A (renal osteodystrophy)

Q. Which component of an intercalated disc provides in attachment site for actin filaments in cardiac muscle?

A. Zonula occludens
B. Fascia adherens
C. Gap junction
D. Tight Junction

Ans: B

Q. Which cell junction is known as zonula occludens?

Ans: Tight junctions

Q. The Epithelial cells get clues about the nature of their neighbours from:

A. Macula adherens
B. Zonula adherens
C. Connexons
D. Zonula occludens

Ans: B

Q. Clostridium perferngens act by damaging which epithelial junction:

a) Zona perfringens
b) Zona occludens
c) Zona adherena
d) Macula adherens

Ans: B

Q. Whorled pattern in which cell?

a) Normal
b) Hypertrophic
c) Neoplastic

Ans: C (poor recall)

Q. A female was operated for a uterine mass in which there were whorls of muscle/cells alongwith areas of necrosis in which cell outlone line was preserved. Type of necrosis:

A- Coagulative
B- Caseous
C- Liquefactive

Ans: A

Q. Type of capillary in rhabdomyosarcoma?

a) Sheath
b) Continuous

c) Discontinuous

Ans: B

Remember:

Continuous capillaries: Fat, Muscle, Nervous system

Fenestrated capillary: Intestinal villi, endocrine glands, kidney glomeruli

Discontinuous capillary: Liver, bone marrowm spleen

Q. Nerve damage between c5 and c6:

A- C 5

B- C 6

C- C 4

D- C 3

Ans: B

Q. Why is the dose of theophylline in infant smaller than in adults?

a) Decreased metabolism
b) Decreased plasma protein binding
c) Smaller size of infant liver

Ans: A

Q. On pelvic examination 45 yes woman an ovarian mass was palpable with hepatomegaly no gastrointestinal mass detected most likely ovarian tumor wud b:

a) Benign cyctic teratoma
b) Brenner tumor
c) Chorio carcinoma
d) Cystadenocarcinoma
e) Krukenberg tumor

Ans: E

Q. HBV latent phase marker:

a) HbeAg
b) HBsAg
c) HBcAb
d) AntiHBs

Ans: C

Q. Brain abscess most common site:

a) Temporal
b) Frontal
c) Parietal
d) Occipital

Ans: B > A

Q. Meningiococcus spread to meninges through?

a) Cribriform plate
b) Blood born
c) Ear

Ans: B

Q. A bacterial plasmid is a:

a) Single stranded linear DNA
b) Single stranded circular DNA
c) Double stranded circular DNA
d) Double stranded linear DNA

Ans: C

Q. Typical feature of virus:

a) Self replicative
b) Own DNA and RNA
c) DNA or RNA but not both

Ans: C

Rememeber: Viruses are coated by envelope

Q. Which of the following is the characteristic of irreversible injury on electron microscopy?

a) Disruption of ribosomes
b) Amorphous densities in mitochondria
c) Swelling of endoplasmic reticulum
d) Cell swelling

Ans: B

Q. Amorphous densities in mitochondria is sign of:

a) Reversible cell injury
b) Irreversible cell injury

Ans: B

Q. DIC is common presentation of:

A- Acute promyelocytic leukemia

B- ALL

C- CML

D- CLL

Ans: A (AML M3)

Q. A patient presented with splenomegaly up-to T-10 and increase WBC count with mature cells which translocation defects occur?

A- 9:22

B- 8:21

C- 14:18

D- None

Ans: A

Explanations:

For CML splenomegaly + Raise TLC + Mature granulocytes + pheledelphia chromosomes

Q. 70-year-old male firm nodule on DRE. PSA 19 ng/dl. What is the diagnosis?

a) Chronic Prostatitis
b) BPH
c) Prostatic adenocarcinoma
d) Leiyomyoma

Ans: C

Q. A young male is admitted with h/o fever and unconsciousness. Csf wbc=400 lymph=65% turbid protein=2.1 glucose 50:

A. Viral
B. Tb meningitis
C. Bacterial

Ans: B

Q. A young patient who had eaten junk food half an hour ago, presents to the doctor with abdominal pain. His blood sample was taken for LFTs, after centrifugation his plasma is turbid milky white, what is responsible?

a. Chylomicrons
b. LDL
c. VLDL
d. Cholesterols

Ans: A

Q. A diagnosed case of tubular adenocarcinoma colon predisposes to:

a) Intussuception
b) Hemorrhoids

Ans: A

Q. While performing Ziehl Neelson staining, the pathologist forgot to add alcohol to sputum sample. What will happen now?

a) Bacteria in background looks blue
b) Bacteria in background looks red
c) Bacteria dewash on smear
d) Bacteria disappear on smear

Ans. B

Q. Intestinal polyps with hyperpigmented spots in perioral area are seen in which autosomal dominant disease?

a) Kawasaki disease
b) Peutz Jegher's disease

Ans: B

Q. A patient has following ABGs value PH 7.1, CO_2 = 50 and HCO_3 = 7 what is likely acid base disorder?

A- Respiratory alkalosis
B- Compensatory respiratory acidosis
C- Compensatory Metabolic acidosis
D- Mixed Acid base disorder

Ans: D

Q. Most common cause of gas gangrene in lower limbs?

A. Clostridium perfringes
B. Clostridium welchii
C. Clostridium septicum
D. Clostridium tetani

Ans: B

Q. Father blood group A+
Mother is B +
Child ll not have and can't be:

a) O^+
b) A^-
c) A^+
d) AB^+

Ans. B A-ve

Q. 60-year-old man presented in OPD with complain of hematuria and increase urinary frequency on DRE there is stony hard mass felt that is prostate lymphatic drainage of it:

A- Deep inguinal
B- Internal iliac and Sacral
C- Superficial inguinal
D- Common iliac
E- Para aortic

Ans: B

Q. Arch of aorta:

A) Anterior mediastinum
B) Superior mediastinum
C) Posterior mediastinum

Ans. B

Q. Heinz bodies seen in:

A- Splenectomy
B- Sickle cell
C- Spherocytosis
D- G6PD

Ans: D

Explanation:

Heinz body and bite cells in – G6PD
Howel jowel bodies – Sickle cell and Splenectomy

Q. A 16-year boy presented to OPD with 104 fever for last 4 days and prescribed antimalarial for fever. After 12 h he presented with cola colored urine. What is the cause?

A- G6PD
B- Black Water fever
C- Drug induced jaundice
D- Paroxysmal nocturnal hemoghlobinuria
E- Hemaolytic yremic syndrome

Ans: A

Q. Water makes how much of body weight in infants:

A. 60%
B. 40%
C. 75%
Ans. C
Infant 75%
Adult 65%

Q. Diphtheria most lethal effect is on which organ?
A. Kidney
B. Lung
C. Heart (myocarditis)
D. Intestine
Ans: C

Q. Slow growing thyroid tumor:
A- Papillary
B- Folicular
C- Medullary
D- Anaplastic
Ans: A

Q. Principle body defense cell against tumor is which of following?
A- Nk cells
B- Macrophages
C- CD4 cells
D- Plasma cells
E- CD 8 cells
Ans: A
Explanation:
In Tissue – Macrophages
In Blood – Neutrophils
On Surface – Skin
Over all first line defense – Skin
Anti-tumor – NK Cells

Q. A patient has depressive state and her aunt was interested in knowing her disease but the doctor refused; what is this termed as?
A- Maleficence
B- Autonomy
C- Confidentiality
D- Respect
E- Ethics
Ans: C

Q. A pregnant woman was bitten by cat during 1st trimester, now her newborn has born with defects of ears and eyes, agent responsible?
A. Treponema palidum
B. CMV
C. Cocaine
D. Toxoplasma Gondi
E. Plasmodium falciparum
Ans: D

Q. Some candidates recall this as. Mother having toxoplasma acute infection in baby diagnosed by:
A- IgG2
B- IgG1
C- IgM
D- IgG
E- IgE
Ans: C

Q. Acute exposure indicated by which antibody?
A- IgM
B- IgG
C- IgE
D- IgA
Ans: A

Q. Few days after infection with typhoid the organism resides in:
A- Gallbladder
B- Lung
C- Payer's patches
D- Liver
E- Colon
Ans: C
Explanation:
Typhoid reside in payer patches 1-4 weeks
Gall bladder → 4 weeks
Regarding typhoid fever
Asymptomatic

Q. Asymptomatic carrier should be isolated and treated:
a) All patients become carrier
b) Rose spots on 7th day
Ans. B > D

Q. Vitamin A deficiency early manifestation:
A- Night blindness
B- Kerato conjunctivitis
C- Liver failure
D- Kidney failure
Ans: A

Q. An elderly man is seen in emergency room with acute moderate diffuse abdominal pain. He is alcoholic acute pancreatitis is suspected. The pair of lab test most valuable in establishing diagnosis would be:

A- Serum Lipase and calcium
B- Serum amylase nand wbc count
C- Serum amylase and lipase
D- Serum calcium and blood cases

Ans: C

Q. Differernce b/w intrensic and extrensic insulin is through: c peptide levels. Hemolytic disease of the new born caused by RH blood group incompatibility requires maternal products to enter the foetal blood stream there for the mediator of this disease is most likely:

A. IgG antibody
B. IGM antibody
C. RH antigen
D. IGM ant RH Antibody
E. IgA antibody

Ans: D > A > C

Q. Thirst is increased by:

a) Increase in ADH
b) Decrease in ADH

Ans: A

Q. Longest pre-erythrocytic phase is of:

A- P. malariae
B- P. falciparum
C- P. ovale
D- P. vivax
E- P. knowlesi

Ans: A

Q. Which one is a tumor suppressor gene when get mutated cause long bone fracture?

a) RAS
b) RB1
c) WT1
d) Myc
e) P53

Ans: A

Q. Mallory bodies seen in:

A- Hepatitis
B- RCC
C- Hemangioma
D- Alcohlic hepatitis

Ans: D

Q. Don't confuse with this scenario. A 40-year-old alcoholic male patient, having raised labs of ALP, serum bilirubin, ALT was raised twice than normal &GGT was raised 6 times than normal, So what will be seen on microscopically examination of the liver?

A- Piecemeal necrosis
B- Mallory bodies
C- Periportal fibrosis
D- Lymphocytosis

Ans: A

Q. Varicella zoster after ist episode. Resides in dorsal ganglion. A neutropenic hypotensive patient admitted in oncology ward with History of dysuria & high grade fever. His blood culture yielded growth of P. aeruginosa. These findings suggest that the disease is a result of the excessive release of the following product:

A- TNF
B- IL 6
C- IL 1
D- Granulocyte Stimulating factor
E- Proteases

Ans: A

Explanation:

Pseudomonas commonly produce – Exotoxin
Pseudomonas Cause fever and Hypotension – Endotoxin
Pseudomonas cause fever by Cytokine – TNF >IL1
Over All Fever – IL 1>TNF

Q. Best site of sample for HLA matching prior to renal transplant?

a) Buccal smear
b) Bone marrow
c) Renal tissue
d) WBC

Ans: D

Q. Some candidates said that option of WBC was not there, and instead options were like this. For the renal transplant you have to do histo compatibility test:

a) Blood
b) Renal tissue
c) CSF
d) Urine

Ans: A (WBC)

Q. Characteristic feature of Aplastic anemia:

A. Pancytopenia

B. Fatty bone marrow

Ans: B

Q. How many HEPA filters are there in safety cabinet?

a) 1
b) 2
c) 3
d) 4

Ans. B

Q. Cervical sympathetic chain injury:

a) Inc. salivation
b) Inc. sweating while eating
c) pupillary constriction

Ans: C (Horner's syndrome)

Q. Screening is done in cancer patient:

A- To detect cancer at early stage
B- To help people in screening
C- 100% sensitivity

Ans: A

Q. A young farmer while spraying suddenly collapsed in his fields and was brought to ER. O/E he was frothing but no salivation and no excessive lacrimation. He is suspected case of OP poisoning. What other sign he will have?

a. Bradycardia
b. Bronchoconstriction
C. B/L Pin point pupils
d. Dry skin
e. Hoarseness

Ans. C>B (organophosphate poisoning)

Q. A man died on autopsy black hilar lymph node due to:

a) Lipofuscin
b) Anthracosis
c) Hemosiderin
d) Carbon

Ans. B

Q. Scenario in which only BT was raised pt aptt normal?

a) Factor 13 deficiency
b) Hemophilia a
c) Hemophilia b
d) Fibrinogen deficiency

Ans: D

Q. Erythropoetin is always rauised in:

a) Primary polycythemia
b) Polycythemia vera
c) Secondary polcythemia

Ans: C

Q. HIV confirmatory test in baby of a HIV positive mother is?

a) PCR
b) ELISA

Ans: A

Remember the following points:
Initial Test – ELISA
Confirmatory Test – Western Blot
In children Confirmatory – PCR
Hall mark of HIV – Proliferation of Virus in T Cell
Hall mark of AIDS – Progressive Immunodeficiency (Decrease CD4 Count)
Most common opportunistic infection in – HIV is TB
Most common opportunistic infection in – AIDS Pneumocystic Jiroveci
Follow up is done by – CD4 Count
Progression from asymptomatic to Symptomatic stage can be assessed by – PCR

Q. In an acute case of Hepatitis, A what investigation will you do:

a) Hep A and B serology
b) Serum bilirubin ALT
c) ALP

Ans. B (poor recall)

Q. Most definite diagnostic gold standard test for typhoid fever:

a) Widal test
b) Typhidot
c) Blood culture
d) Bone marrow culture
e) CBC

Ans: C

Q. 70 year woman admitted in the cardiology ward with complaint of chest pain, known case of ischemic heart disease and also has non insulin diabeted mellitus, ECG does not shoe changes hb 6.5 gm/dl.wbc 7 x 10(9) and platelets 120x10(9) pt 13 sec (control 11 secs) aptt 35 sec (control 32 sec) bood component recommended for her is whole blood ffp:

a) Red cell concentrate
b) Platelet concentrate
c) Fresh whole blood

Ans: C

Q. In hereditary spherocytosis what is true?

A- Cytoskeleton deformity
B- Cartilage defect
C- Collagen defect
D- Cell defect
Ans: A

Q. If defective protein asked. Spectrin increased adrenocorticotropic hormone. (ACTH) secretion would be expected in patients:
A) With chronic adrenocortical insufficiency (Addison's disease)
B) With primary adrenocortical hyperplasia
C) Who are receiving glucocorticoid for immunosuppression after a renal transplant
D) With elevated levels of angiotensin II
Ans: A

Also know:

Q. Adrenocortical insufficiency causes:
a) Hyponatremia
b) Hypoglycemia
Ans: A

Q. Per 1-degree rise in farenheit, how much rise in BMR is seen?
a) 1%
b) 5%
c) 7%
d) 15%
Ans: C

Q. A patient of burn given succinylcholine after which ECG shows Tall T wave due to?
A- Hyponatremia
B- Hypokalemia
C- Hyperkalemia
D- Hypochloremia
Ans: C

Q. In cryofracture which type of cell junction forms circles around the cell membrane?
a) Tight junctions/Zona occludens
b) Gap junctions
Ans: A (poor recall)

Q. To prevent iatrogenic infections in ICU we should:
A- Wear gloves
B- Use extensive hand washing after examining every patient
C- Sterilize used instruments
D- Wear mask
Ans: B

Q. Pulmonary EMBOLISM is associated with:
a) Small sized arteries
b) Medium sized arteries
c) Large arteries
Ans. B

Also know:

Pulmonary infarction is associated commonly with small sized arteries.

Q. Anti sera agglutinates with A and D and plasma has anti B antibodies which blood group it is?
A- A-ve
B- A+ve
C- O-ve
D- O+ve
E- B+
Ans: B

Q. The vibration of ventricular muscles during rapid filling can produce:
a) S1
b) S2
c) S3
Ans. C

Q. Most common cause of nosocomial (hospital acquired pneumonia) is:
A- S.aureus
B- S. Pneumonea
C- Klebsiella
D- H.influenza
E- Pseudomonas
Ans: A

Q. About pandemic:
a) Antigenic shift
b) Antigenic drift
Ans. A

Remember:

Antigenic Shift = Pandemics
Antigenic Drift = Epidemics

Q. Standard deviation plus mean is:
A- Confidence interval
B- Confidence error
C- Sample Bias
D- Variance
Ans: D

Explanation:

Confidence Interval – Mean and Standard Error
Confidence Limit – Standard Error and T value
Variance -Standard deviation plus mean

Q. Patient with hyperthyroidism sign and symptoms will also have other problem is:

A- Vision problem
B- Hearing problem
C- Taste problem
D- Pressure loss

Ans: A

Q. A patient has anemia and hypersegmented neutrophils are present on peripheral blood examination with Raised MCV he is also having difficulty in balance which type of anemia he is suffering from?

A- Magaloblastic anemia
B- Iron deficiency anemia
C- Thalassemia
D- Anemia of chronic disease
E- Sideroblastic anemia

Ans: A

Explanation:

B12 deficiency cause megaloblastic anemia which is related to Neurological sign of DCML and Balance problem.

Q. HCC is caused by which of following?

A- Nitrosamine
B- Aniline dye
C- Cyclophosphamide
D- Benzine
E- Aflatoxin

Ans: E

Q. Histoplasmosis most commonly involved organ system:

A- Renal
B- CVS
C- Respiratory
D- Reticuloendothelial

Ans: D

Q. Bean shaped organs in neck antigens enter in them through Afferent lymphatics the diagnostic finding on investigation of metabolic alkalosis is:

a. HCO_3 more than 24 meq/l
b. CO_2 more than 24 meq/l
c. pH less than 7.4
d. Decreased o2 in the blood
e. Increase serum carbonic anhydrase

Ans: A

Q. Renal failure? Raise Creatinine, potassium normal fasting bsl

Production site of inhibin by sertoli cells:

a) Testis
b) Prostate
c) Seminal vesicles

Ans: C>A

Q. A child with recurrent infection which immunoglobulin deficiency is likely?

A- IgG
B- IgA
C- IgM
D- IgE
E- IgD

Ans: B

Explanation:

IGA deficiency cannot be symptomatic till 4 years so
Newborn IgG deficiency
Child IgA deficiency

Q. Duchenne muscular dystrophy defective gene makes the cell impermeable to which of the following?

a) Amino acid
b) Water
c) Electrolytes
d) Protein

Ans. D

Q. Which bacteria uses 5-10% CO2 for growth?

Ans: Brucella

Q. A 30-year-old male died suddenly after a rise in blood pressure. On autopsy the ruptured vessel completely lacked the tunica intima at the point of the aneurysm. The most likely type of aneurysm is?

a) Dissecting aneurysm
b) Berry anurysm
c) Marfan aneurysm

Ans: A

Some people recall this as:
Regarding aortic aneurysm:
Involves all 3 layers of vessel wall

Q. A patient unable to recognize faces (prosopagnosia) area injured is:

A- Parietal
B- Parieto occipito temporal lobe
C- Somesthetic area
D- Frontal lobe

E- Occipital lobe
Ans: B
Explanation:
For propagnosia inferior temporal lobe is mostly related but if option of temporal lobe is not given then parieto occipito temporal lobe option is also correct.
Prospagnosia lesion in – Inferior temporal lobe.
Asterognosis lesion in – Parietal lobe.
Asterognosis lesion in – Somesthetic association area > primary somatosensory

Q. Part of pituitary gland at infundibulum called:
a. Pars nervosa
b. Pars tuberalis
c. Pars dislais
d. Pars intermedia
Ans: B

Q. A 65 years old male has TAG level 19mmol/L. Which of the following is the most immediate concern?
a) Cholecystitis
b) Chronic renal failure
c) Pancreatitis
d) Liemia retinalis
e) Peripheranl neuropathy
Ans: C

Q. Mother having rubella acute infection in baby diagnosed by:
A- IgG2
B- IgG1
C- IgM
D- IgG
E- IgE
Ans: C
Explanation:
- Mother Affected with Rubella and Baby got Symptoms Diagnosed by – IgM
- Mother Affected with Rubella and Baby Symptoms less to See immunoglobulin – IgG2 > IgG1
- Rubella in pregnancy complication overall – Deafness > Cataract
- Rubella in pregnancy complication Within 7 weeks – Cataract
- Rubella in pregnancy complication After 7 weeks – Deafness

Q. A woman with peripheral tingling sensation, numbness, diplopia, gait abnormality was diagnosed with a demyelination disorder, which of the following cells get affected in such disorder:
a- Oligodendrocytes
b- Glial cells
c- Ependymoma
d- Schwann cells
Ans: ?
Also know:

Q. A 30 years old lady presented with vertigo, muscle weakness, bladder tone loss and blurred vision likely diagnosis:
A. schwannoma
B. CNS demyelination
C. Degenerative CNS neuron
D. Motor neuron disease
Ans: B (MS)

Q. Large friable irregular vegetation seen in:
A- Libman Sac endocarditis
B- Infective Endocardtitis
C- Terminal Neoplasm
D- Rheumatoid arthritis
Ans: B
Explanation:
Flat small to medium vegetation – Libman Sac endocarditis
Friable small vegetation – NBTE
Friable large irregular vegetation – IE

Q. Strong vagal stimulation of the heart will cause an increase in:
a- PR interval
b- Heart rate
c- Cardiac output
d- Stroke volume
e- Ventricular contractility
Ans: A (thereby decreasing HR)

Q. P53 is a tumor suppressor gene, when it is absent or mutated it may indicate?
A- Cell survival
B- Apoptosis
C- Cell death
D- Cell necrosis
Ans: A
Explanation:
P53 is tumor suppressor gene and normally because apoptosis when it is absent or mutated so it lost its function hence no apoptosis or cell death and cell survival will occur.

Q. Kaplan – Meier curve indicates which of following?
A- Incidence of disease
B- Demography
C- Severity of disease
D- Drug side effects
E- Survival of patient
Ans: E

Q. A small child had exchange transfusion as HB was decreased after that slowly his ear became red then trunk then whole body, also he bad diarrhea jaundice and deranged LFTs he is having:
A- Hypersensitivity
B- Graft vs Host disease
C- Acute transfusion reaction
D- Delayed response
E- Septic shock
Ans: B
Explanation:
Hyper acute Rejection – Pre formed antibodies (Type 2 Hypersensitivity)
Acute Rejection – CD8 Cells (Type 4 Hypersensitivity)
Chronic Rejection – CD4 Cells (Type 2+4 Hypersensitivity)
Graft vs Host Disease – Type 4 Hypersensitivity and Present with Diarrhea

Q. A female who just had her 4th baby and history of PPH now presented to you with loss of pubic and axillary hair along with amenorrhea
A- Pidtuatry adenoma
B- Pituitary necrosis
C- Shemron syndrome
D- Pralacinoma
Ans: B
Oncogene whose mutation causes bone cancer
RB gene

Q. Man lifted heavy weight sudden pain in arm, on examination swelling in upper forearm of the muscle which is attached to radial tuberosity?
A- Biceps brachi
B- Brachioradialis
C- Anconeus
D- Supinator
E- Pronator
Ans: A

Q. Biopsy in neck region followed by ear lobe numbness which nerve is affected:
A- Greater Auricular nerve
B- Auriculotemporal nerve
C- Lessesr auricular nerve
D- Temporal nerve
Ans: A

Q. Appropriate function of sternocleidomastoid?
E. Turns neck to the same side against resistance
F. Flexes neck
G. Extends neck
H. Turns neck to the opposite side against resistance
Ans. D

Q. ECG shows regularly prolonged PR interval with no missed beats:
A) First degree heart block
B) Bradycardia
C) Second degree heart block
D) Third degree heart block
Ans: A

Q. Which is true about albinism?
a) Melanocyte present but melanin absent
b) Melanocyte destryed in autoimune process
c) Inability to syntesitize melanin from tyrosine
d) A and c
Ans: D
Also know:
In vitiligo – destruction of melanocytes
Safe form of thromboembolism prophylaxis?
Heparin

Q. After exercise, a person lost 2L fluids by sweating. Then he drinks 2L of water, what will happen?
A: Increased ECF volume
B: Increased ICF volume
C: Increased ECF osmolarity
D: Decreased ECF osmolarity
Ans: B
Explanation:
Increase ICF volume >Decrease ICF osmolarity >Increase ECF volume >Decrease ECF osmolarity

Q. Total iron in female body:
a) 1gm
b) 2gm
c) 4gm

d) 5gm

Ans: B

Q. Diabetic Nephropathy is diagnosed by:

A- Increase Urinary Albumin
B- Increase Serum Albumin
C- Microalbuminuria
D- Increase Urinary Nitrogen

Ans: C

Q. What is the primary site of DVT?

a) Pulmonary artery
b) Pulmonary vein
c) Abdominal vein
d) Deep veins of calf

Ans: D

Q. Site of emergency venous "cut down" is:

A) Femoral vein
B) Superficial veins of leg
C) Small saphenous vein
D) Popliteal vein
E) Great saphenous vein

Ans: E

It can also be asked in this way

Q. The skin overlying the region where a venous cut down is made to access the great saphenous vein is supplied by:

A. Femoral N
B. Sural N
C. Tibial N
D. Superficial Peroneal N

Ans: A

Q. Good pasture show which type of hypersensitivity?

A- Type 1
B- Type 2
C- Type 3
D- Type 4

Ans: B

Q. A jaundiced pt with increased protoporphyrin and ALA, cause:

A. Iron def.
B. B12 def
C. Folate def
D. Lead poisoning

Ans: D

Also know

In lead poisoning microcytic hypochromic anemia with basophilic stippling is seen

And one of the key signs is peripheral neuropathy

Q. Cell arrested in diplotene which is phase of?

A- Metaphase
B- Telophade
C- Anaphase
D- Prophase
E- Interphase

Ans: D

Q. Increased GFR is caused by:

A. Decreased arterial pressure
B. Increase thickness of glomerular membrane
C. Aldosterone
D. Decreased Oncotic pressure.
E. Decreased glomerular pressure

Ans: D

Q. A diabetic patient presented in OPD with oozing greenish discharge with fruity odor from wound. Which of following is causative agent?

A- Bacteriods
B- E.coli
C- Listeria
D- Pseudomonas
E- Klebseila

Ans: D

Explanation: Pseudomonas aeruginosa has a characteristic sweet, fruity odour due to its production of trimethylamine. This organism also produces the greenish-blue pigment pyocyanin.

Q. Smallest diameter is in:

a) Alveolar sac
b) Alveolar duct
c) Alveoli
d) Respiratory bronchiole

Ans: A

Q. Most radiosensitive tumor is which of following?

A- Lymph node Tumor
B- Seminama
C- Glioma
D- Craniopharyngiona
E- BrainStem Glioma

Ans: A

Q. On histology, shows flask shaped cells, multiple dendritic synapse in:

A- Substantia nigra
B- Cerebral cortex
C- Geniculate ganglion
D- Cerebellar cortex

Ans: D

Q. A 30 years man with sore throat & cervical lymphadenopathy; CBC picture shows presence of atypical lymphocytes the most important test in this setting is:

A- Monospot test
B- Mantoux test
C- Lymph node biopsy
D- Blood culture
E- X-ray

Ans: A

Explanation:

Sore throat with cervical lymphadenopathy and atypical lymphocytes indicating Infectious mononucleosis which is diagnose by Monospot test and Causative virus is EBV.

Q. Most likely cause of negative mantoux test in pt wd tb would be:

a) Immunosuppressive therapy
b) Miliary tb

Ans: A

Also know: If mantoux test is positive – pt is sensitive to TB

Cells involved in mantoux – lymphocytes and macrophages

Length of cardiac myocytes depends on – Preload (frank starling law)

Q. Whorls in asthmatic patients are formed by?

Options were not recalled

Clear your concept about this so that you may be able to answer the question regardless

The whorls this question is referring to are "Curshmann Spirals" formed in asthmatic patients. Asthma manifests morphologically by bronchial smooth muscle

hypertrophy, hyperplasia of bronchial submucosal glands and goblet cells, and airways

plugged by mucus-containing Curschmann spirals (whorl-like accumulations of epithelial

cells), eosinophils, and Charcot-Leyden crystals (crystalloids of eosinophil-derived proteins).

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Pathology November – 2022

1. Gram staining sequence is as following:

A. Crystal Violet, iodine, alcohol, safranin
B. Crystal Violet, iodine, safranin, alcohol
C. Crystal Violet, alcohol, iodine, safranin
D. Crystal Violet, safranin, iodine, alcohol

Ans. A

2. ZN staining done, few rods appear pink with green cocci in background, which component in rods give them pink color?

A. Peptidoglycan
B. Mycolic acid
C. Teichoic acid
D. Glutamate

Ans. B

If asked: After gram staining why do gram positive bacteria stain purple – Thick peptidoglycan

3. Lecithinase produced by:

A. C. Tetani
B. C. daficile
C. C. perfringens
D. C. botulinum

Ans. C

4. Structure present behind ovarian fossa:

a) Internal iliac artery
b) Ureter
c) External iliac artery
d) Broad ligament

Ans. A

5. Which of the following is shortest acting hormone?

a) ACTH
b) Acetylcholine
c) Epinephrine
d) Thyroxine

Ans. C

Remember:

ACTH half-life 20 mins
Acetylcholine half-life 6-12 days
Epinephrine half-life 2-3 minutes
Thyroxine half-life 6-7 days

Note In past MCQs "GnRH" (half-life 2-4 minutes) has also been asked, but it was not present in options in this MCQ.

6. Philadelphia chromosome present in:

A. ALL
B. CLL

C. CML
D. Hodgkin lymphoma

Ans. C

7. B cells have following marker:
A. CD 19
B. CD 18
C. CD 89
D. CD34

Ans. A

8. Inorganic phosphate increases in:
A. Osteoporosis
B. Hypervitaminosis D
C. Hyperthyroidism
D. Renal failure

Ans. D

9. A man with Hb =15g/dl, PO2=60mmHg, no history of blood loss, poisoning etc. What type of hypoxia will be there?
A. Hypoxic hypoxia
B. Stagnant hypoxia
C. Anaemic hypoxia
D. Histotoxic hypoxia

Ans. A

10. ICF volume in a man:
A. 14L
B. 28L
C. 42L
D. 11L

Ans. B

11. Sensitive test for SLE:
A. Anti dsDNA
B. Anti-smith antibody
C. ANA
D. Anti-histone antibody

Ans. C

12. Erythropoitein after binding to receptor on cell membrane activates:
A. Fas ligand
B. Jak 2 stat 5 pathway

Ans. B

13. Viral giant cells present in:
A. Herpes simplex
B. Herpes zoster
C. Chicken pox
D. Measels
E. CMV

Ans. D (Warthin Finkeldey giant cells)

14. Which species of E. coli produces toxin that has the similar effect to cholera toxin
A. Enteroinvasive E. coli
B. Enterohemorrhagic E. coli
C. Enterotoxigenic E. coli
D. Enteropathogenic E. coli

Ans. C

15. A man presented with nodule on nose, which is pearly nodular, overlying skin is atrophic. Swelling is firm and adherent to underlying structures. Most likely diagnosis is:
A. Squamous cell CA
B. Basal cell CA
C. Papilloma
D. Melanoma

Ans. B

16. A patient presented with corneal arcus and Achilles tendon nodules which investigation should be done
A. Lipid profile only
B. Lipid profile and glucose
C. Triglycerides
D. Lipoproteins

Ans. A

17. A child presented with sore throat, difficulty in passing laryngoscope what is the most like causative organism
A. H. influenza
B. Measles
C. Mumps
D. Varicella

Ans. A

18. HPV causes:
A. Oropharyngeal CA
B. Nasopharyngeal CA
C. Lung CA
D. Bladder CA

Ans. A

19. Which organism grows at 42^{o}C?
A. Vibrio cholera
B. Listeria monocytogenes
C. Campylobacter jejuni
D. Helicobacter pylori

Ans. C >A

20. Heating at 100^{o}C for 20mins for 3 consecutive days is known as:
A. Inssipation
B. Sterilization

C. Tyndallisation
D. Pasteurization

Ans. C >A

21. Largest cell in the blood:

A- Basophil
B- Monocytes
C- Neutrophils
D- Eosinophil

Ans: B

Explanation:

In Blood – Monocyte
In Bone marrow – Megakaryocyte
Over All – Megakaryocyte >Monocyte

22. A child presented with chronic diarrhea not resolving with gluten free diet:

A. Whipple disease
B. Giardiasis
C. Vibrio cholera
D. Cystic fibrosis

Ans. B

23. Conjugation in liver occurs through:

A. ALT
B. ALP
C. AST
D. GGT
E. Glucornyl transferase

Ans. E

24. A boy had an accident and developed a hematoma on arm which slowly resolved and develops yellow brown colour. This is due to:

A. Bilirubin
B. Biliverdin
C. Lipofuscin
D. Hemosiderin

Ans. D

25. Hemosiderosis is defined as:

a) Iron overload
b) Iron overload with tissue damage

Ans. A

The **key difference between hemochromatosis and hemosiderosis** is that hemochromatosis is the systemic deposition of iron that causes tissue damages in the body, while hemosiderosis is the focal deposition of iron that does not cause any tissue damages in the human body.

26. Fracture of head of femur, lead to avascular necrosis of head artery involved:

A- Lateral circumflex
B- Descending branch lateral circumflex
C- Medial Circumflex Artery
D- Obturator artery

Ans: C (FA)

27. Which one contains highest content of proteins?

A. LDL
B. VLDL
C. HDL
D. Chylomicrons

Ans. C

28. When BP is less than 60mmHg. Which response activates rapidly?

A. Baroreceptor response
B. CNS ischemic response
C. Brain bridge reflex

Ans. B

29. A person working in cotton industry is on risk of developing:

A- Farmers lungs
B- Byssinosis
C- Baggasosis
D- Silicosis

Ans: B

30. Which one is most abundant in blood?

A. LDL
B. VLDL
C. Chylomicrons
D. HDL

Ans. D (but largest = chylomicrons)

31. A patient of acute leukemia, multiple platelets transfusions done during induction phase, now there is no increase in platelets after transfusion, what is the reason behind this?

A. Antibody developed against HLA
B. Leukaemia relapse phase
C. Give IVIG so platelets rise
D. By irradiating platelets so no reaction takes place
E. Splenectomy

Ans. A

32. Main objective of screening test is:

A. To treat the disease early
B. Acceptable to population
C. To detect the disease at early stage

Ans. C

33. During hepatocellular damage, which enzyme would be raised?

A. GGT
B. ALT
C. ALP
D. Amylase
E. Lipase

Ans. B

34. A full term neonate born with bleeding, PT, APTT and platelets count normal. What is the cause?

A. Factor 8 deficiency
B. Vitamin K deficiency
C. Factor 9 deficiency
D. Factor 13 deficiency

Ans. B

35. Which one is correct about the erythropoiesis in bone marrow?

A. Myeloid to erythroid ratio 4:1
B. T lymphocytes more than B lymphocytes
C. Long bone does haematopoiesis during whole life
D. Fatty bone marrow

Ans. B

36. Which structure is compressed due to tumor behind root of left lung?

A. Phrenic nerve
B. Vagus nerve
C. Azygous vein
D. Arch of aorta

Ans. B

Note: If asked structure that arches over root of left lung – Arch of aorta

37. A man presented with depressed nasal bridge; AFB positive with non-caseating granuloma on lymph node biopsy what is the diagnosis

A. Tuberculosis
B. Sarcoidosis
C. Leprosy
D. BCC

Ans. C

38. Lesion at right optic tract result in:

A- Blindness
B- Left Homonymous Hemianopia
C- Right Homonymous Hemianopia
D- Heteronymous Hemianopia

Ans: B

Explanation:

- Middle Optic Chiasma Lesion – Bitemporal Heteronymous Hemianopia
- Optic Track Lesion – Homonymous Hemianopia
- Geniculocalcarine tract Lesion – Homonymous Hemianopia with Macular Sparing
- Right Optic Track Lesion – Left Homonymous Hemianopia
- Pituitary Tumor with Homonymous hemianopia – Optic Track lesion
- Pituitary Tumor with Heteronymous hemianopia – Optic Chiasma Lesion
- Right Optic Track Lesion causes – Right Temporal and Left Nasal Fibers loss
- Right optic track lesion causes – Right nasal and left temporal vision loss
- Right optic track is made up of – Right Temporal fibers (which See Nasal Vision) and left nasal fibers (which See Temporal Vision) so fibers loss and vision loss are Separate things
- Patient is blind on testing but have no Insight of vision loss – Cortical blindness
- Cortical blindness due to blockage in – PCA

39. A patient is presented with PTH increased Ca level and gastric ulcers. What is the diagnosis?

A. Renal failure
B. MEN 1
C. Primary hyperparathyroidism
D. APUDoma

Ans. C

40. A patient presented with anaemia, mild splenic tip palpable spherocytes on peripheral smear and osmotic fragility test positive:

A. ALL
B. Sickle cell anaemia
C. Hereditary spherocytosis
D. AIHA

Ans. C

41. A tumour of pituitary gland compresses anteriorly:

A. Optic chiasma
B. Optic tract
C. Optic nerve
D. Lateral geniculate body

Ans. C

42. Which one is correct about autoclaving?

A. Done at 10lb pressure
B. Temp is 120*C
C. Done for 3 hours
D. Do not kill spores

Ans. B

43. Brush border of PCT is due to:
A. Villi
B. Microvilli
C. Cillia
D. Stereocilia

Ans. B

44. Serology test done for which of the following organisms?
A. S.Aureus
B. Q fever
C. Nocardia
D. Actinomyces
E. Neisseria

Ans. B

45. Which organism has TSST toxin?
A. S. epidermidis
B. S. Bovis
C. S aureus
D. S pyogenes

Ans. C

Most important feature of toxic shock syndrome – Skin desquamation

46. A patient presented with dry cough, fever and joint pains which test should be done?
A. Sputum culture
B. Blood culture
C. Sputum and blood culture
D. Cold agglutinins

Ans. D (atypical pneumonia by mycoplasma)

47. A lady with IUCD and basophilic colonies on culture of discharge, likely organism is:
A. Nocardia
B. S. aureus
C. Actinomyces
D. E faecalis

Ans. C

48. On biopsy of a specimen there is sand grain appearance and fibrovascular stroma:
A. Lungs
B. Prostate
C. Breast
D. Adrenals

Ans. C

49. An old patient present with cough with yellow sputum. There is opacity in right lung lower zone. Patient cannot recognize his relatives. Which organism is responsible?
A. S aureus
B. H infleunza
C. S pneumonia
D. M pneumonia

Ans. C

If just yellow sputum is mentioned, then pick staph aureus

If it is also mentioned that the patient is old and cannot recognize relatives after onset of pneumonia then go for s.pneumoniae

50. A patient presented with CA breast. Her mother also has ovarian CA. What genetic mutation will be present in this patient?
A. MSH1
B. MSH2
C. BRCA1
D. KRAS

Ans. C (Germline mutations in the tumor suppressor genes **BRCA1** and **BRCA2** predispose individuals to **breast** and **ovarian** cancers)

If there is mention of colorectal cancer, then go for MSH2 as it points towards Lynch Syndrome.

51. A patient of Hodgkin lymphoma presented with fever, neck stiffness which organism is responsible
A. Strep pneumoniae
B. H infleunza
C. N meningitidis
D. Cryptococcus neoformans
E. Histoplasmosis

Ans. D

52. A patient with pleural effusion, pleural tap done and pleural fluid aspirated which shows eosinophils with leukocytes seen with coagulum of amorphous material. What type of inflammation seen?
A. Acute inflammation
B. Chronic inflammation
C. Fibrinous inflammation
D. Granulomatous inflammation

Ans. C (?)

53. Muscles of forced inspiration are:
A. Diaphragm, external intercostal, scalnes anterior, sternocleidomastoid
B. Diaphragm, internal intercostal, scalnes anterior, sternocleidomastoid
C. Diaphragm, external intercostal, external oblique, sternocleidomastoid
D. Diaphragm, external intercostal, external oblique, rectus abdominis

Ans. A

54. A construction worker presented with SOB, pleural effusion and pleural plaques. He is likely suffering from
A. Baggasosis
B. Byssinosis
C. Anthracosis
D. Asbestosis

Ans. D (in case of pleural plaques always keep asbestosis in mind)

55. A woman from a rural area presented with watery diarrhea with 18-20 episodes per day with urea and creatinine raised what is the likely organism?
A. Campylobacter jejuni
B. Vibrio cholera
C. Shigella
D. Salmonella

Ans. B

56. WBC transmigration facilitated by:
A. ICAM
B. Integrins
C. Selectins

Ans. A

57. Most predominant glial cells in grey matter are:
a) Oligodendrocytes
b) Fibrous astrocytes
c) Schwan cells

Ans. A

✓ Oligodendrocytes and Astrocytes are both glial cells.
✓ Most Numerous Glial cell overall is Astrocytes
✓ Most numerous glial cells in White matter is Oligodendrocytes.
✓ Most Numerous Astrocyte in white matter is Fibrous Astrocyte
✓ Most Numerous Astrocyte in Gray matter Is Protoplasmic Astrocyte.

58. A patient presented with pallor and anaemia. There was hx of complete gastrectomy few years back:
A. Pernicious anaemia
B. Sideroblastic anaemia
C. Normocytic anaemia
D. Anaemia of chronic disease

Ans. A (if megaloblastic anemia is in options prefer that)

Explanation:
- Partial Gastrectomy – Iron Deficiency anemia.
- Complete Gastrectomy – Megaloblastic anemia so inj Vitamin B12 should be given
- Before 6 months –Iron Deficiency anemia.
- After 6 months – Megaloblastic anemia
- Over all – Iron Deficiency anemia > Megaloblastic anemia.
- Gastrectomy can produce Pernious anemia like symptoms but not actual Pernious anemia as it is Autoimmune.

59. Patient had ileum resection which vitamin should be added now?
A- Vitamin D
B- Vitamin C
C- Folic acid
D- Vitamin B – 12

Ans: D

Remember:
Proximal ileum – B12 deficiency
Distal Ileum – Loss of bile salts

60. A person with Gunshot injury to the person, at c7 what will occur in below the level of lesion contra laterally?
A- UMN
B- LMN
C- Contraleral loss of pain and temperature below level of lesion
D- Ipsilateral loss of pain and temperature at site

Ans: C

61. Epithelium of thyroid gland is:
A. Simple squamous
B. Simple columnar
C. Simple cuboidal
D. Stratified squamous

Ans. C

But remember active thyroid follicles have columnar cells

62. Thyroglobulin is produced from:

A- Chief cells
B- Follicular cells
C- Parafollicular cells
D- Isthmus
E- Tracheal ring

Ans: B (BRS)

63. In response to ACTH the largest layer zona fasiculata releases:

A. Androgens
B. Glucocorticoids
C. Mineralocorticoids

Ans. B

Zona reticularis (Deepest layer)	Androgens (testosterone, estrogen)
Zona fasciculata	Glucocorticoids (cortisol)
Zona glomerulosa (Most Superficial layer)	Mineralocorticoids (aldosterone)

Remember:

- ✓ Adrenal medulla constitutes 28% of the mass of adrenal gland. And in Guyton its upto 20%.
- ✓ Destruction of anterior pituitary gland causes decrease functioning of – Zona fasiculata
- ✓ Lymphocyte production- principle cells of thyroid
- ✓ Lymphocyte turn over - cortisol / zona fasiculata

64. MHC function is:

A- Immune suppressor
B- Immune promoter
C- Immune recognition
D- Immune survival

Ans: C

65. Lymphoid follicles are found in:

A. Cortex of thymus
B. Medulla of thymus
C. Cortex of lymph nodes
D. Medulla of lymph nodes
E. Red pulp of spleen

Ans. C

66. Renal pyramids found in:

A. Renal cortex
B. Renal medulla
C. Renal pelvis
D. Renal hilum

Ans. B

67. Drug absorbed through aqueous diffusion:

A. Diazepam
B. Vancomycin
C. Digoxin

Ans. C

68. Renal compensation of hyperkalaemia results in:

A. Alkalosis
B. Acidosis
C. Hyponatremia

Ans. B

69. Compression of aorta in aortic opening results in compression of:

A. Thoracic duct and azygous vein
B. Phrenic nerve
C. Vagus nerve
D. Oesophagus

Ans. A

70. A person is having history of smoking and drinking from many years On Endoscopy there is a mass in middle third of esophagus. What could it likely be?

A- Adenocarcinoma
B- Squamous cell Carcinoma
C- Baretts esophagus
D- Chronic esophagitis
E- Gastritis

Ans: B

Explanation:

Upper 2/3rd (Squamous cell carcinoma)

- Alcohol
- Hot Liquids
- Stricture
- Smoking Achlasia

Lower 1/3rd (Adenocarcinoma)

- Chronic GERD
- Barret Esophagous
- Obesity
- Smoking
- Achlasia

71. Persistent hypokalemia occurs in:

A. Chronic vomiting
B. Dietary deficiency
C. Respiratory alkalosis
D. Chronic renal failure

Ans. A (Ureterosigmoidostomy > Prolong vomiting)

72. Best method to preserve cells:

A. Liquid nitrogen
B. Freeze at –20*C
C. Lyophilization

D. Serial subcultures

Ans. C>B

73. A alcoholic man presented in ER with severe pain in abdomen radiating towards back. AST and ALT normal. Serum amylase=1600. What is the likely diagnosis?

A. Acute cholecystitis
B. Acute pancreatitis
C. Acute pericarditis
D. Aortic dissection

Ans. B

74. Nissle substance related to:

A- RER
B- SER
C- Peroxisome
D- Ribosome

Ans: A

75. Which muscle elevates and retracts mandible?

A. Lateral pterygoid
B. Medial pterygoid
C. Masseter
D. Temporalis

Ans. D

76. Receptors on SA node and uterus:

A. B1 & B2
B. Alpha 1 & B2
C. Alpha 1 & B1
D. B2 & B1

Ans. A

77. A patient with increased serum PTH with decreased serum calcium and increased phosphate with creatinine raised:

A. Acute renal failure
B. Chronic renal failure
C. Hyperparathyroidism
D. Hypoparathyroidism

Ans. B

78. A patient presented with hoarseness of voice this is due to damage to:

A. External laryngeal nerve
B. Recurrent laryngeal nerve
C. Superior laryngeal nerve
D. Vagus nerve

Ans. B

79. A patient presented with bleeding, history of warfarin intake present, how it can be reversed:

A. Cryoprecipitate
B. Vit. D
C. Vit. K
D. Platelets

Ans. C

80. Familail adenomatous polyposis is:

A. AD
B. AR
C. X linked recessive
D. X linked dominant

Ans. A

81. Atherosclerois plague which of following 3 found?

A- Smooth muscle, C.T neutrophil
B- Smooth muscle lymphocyte
C- Lymphocytes
D- Smooth muscle, C.T and Macrophages

Ans: D (Robins)

Explanation:

Atherosclerotic plaque has 3 principle components

Cells

Smooth muscle cells, macrophages and T cell

Extracellular Matrix

- Collagen
- Elastic Fibers

Lipids

Extracellular and Intracellular lipids

82. A patient with bitot spots and keratomalacia have deficiency of following:

A. Vit. A
B. Vit. K
C. Vit. D
D. Vit. B1

Ans. A

83. A body after death is stiffened and in rigor mortis. It is due to:

A. Failure of separation of tropomyosin and calcium
B. Failure of separation of actin
C. Failure of separation of myosin cross bridges

Ans. C

84. Pillars of medical ethics are:

A. Autonomy, beneficence, non-maleficence, justice
B. Beneficence, justice
C. Justice
D. Injustice and autonomy

Ans. A

85. Deficiency of which causes hyperexcitability?
A. K^+
B. Na^+
C. Ca
D. Mg
Ans. C

86. Marathon runner at the end of exercise have:
A. Inc insulin, increase glucagon
B. Dec insulin, dec Glucagon
C. Inc glucagon, dec insulin
D. Dec glucagon, Inc insulin
Ans. C

87. Thumb is placed between infrahyoid muscle and trachea; which artery is palpated?
A. Internal carotid artery
B. External carotid artery
C. Common carotid artery
D. Internal laryngeal artery
Ans. C

88. A child presented with chronic diarrhea, recurrent respiratory tract infections with pseudomonas. Which test is used to detect the disease?
A. Celiac disease
B. Cystic fibrosis
C. Kawasaki disease
D. Giardiasis
Ans. B (the test would be sweat chloride test)

89. A patient presented with tuft of hair at lumber region of spinal cord. What is the diagnosis?
A. Spina bifida with meningocele
B. Spina bifida occulta
C. Spina bifida with meningomyelocele
Ans. B

90. A child presented with cystic swelling at lower back which contains meninges without neural tissue. What is diagnosis?
A. Spina bifida with meningocele
B. Spina bifida occulta
C. Spina bifida with meningomyelocele
Ans. A

91. Chronic allergy reaction will show degranulation of:
A. Neutrophils
B. Basophils
C. Monocytes
D. Eosinophils
E. Mast cells
Ans. E

92. A patient presented with bleeding PT normal platelet count normal increased APTT where is the defect?
A. Extrinsic pathway
B. Intrinsic pathway
C. Intrinsic + extrinsic pathway
D. Von Will brand factor
Ans. B

93. A patient developed SOB, respiratory difficulty, urticaria after injection of pencillin. What is the treatment?
A. Norepinephrine
B. Dopamine
C. Epinephrine
D. Atropine
Ans. C (adrenaline IM)

94. A lady presented with fatigue and SOB with Hb=9.2. doctor advised her iron supplements. After 2 month her Hb =10. What investigation should be done?
A. Serum ferritin
B. Serum iron
C. Hb electrophoresis
D. TIBC
E. Bone marrow biopsy
Ans. C

95. A child ate food at restaurant and then present with abdominal pain with dysentery, stool contains pus and RBCs causative agent is:
A- Campylobacter
B- Enterotoxigenic E coli
C- Enterohemorrhagic E coli
D- Enteropathogenic E coli
E- Salmonella
Ans: C (FA)

96. A patient presented with anaemia, peripheral smear shows small red cells with dec central pallor and rounded in shape, osmotic fragility test is also positive. These cells are:
A. Elliptocytes
B. Spherocytes
C. Echinocytes
D. Burr cells

Ans. B

97. A patient presented with pallor jaundice and splenic tip palpable. Peripheral smear shows spherocytes. Which one is defective?

A. Spectrin
B. Band 3
C. Ankyrin
D. Paladin

Ans. A

98. On histology, shows flask shaped cells, multiple dendritic synapse in:

A- Substantia nigra
B- Cerebral cortex
C- White matter of spinal cord
D- Cerebellar cortex
E- Grey matter of spinal cord

Ans: D

99. A newborn baby with erythroblastosis fetalis, exchange transfusion also done but he died. What will be seen on autopsy?

A. Contractile band
B. Staining of basal ganglia
C. Dilatation of ventricles

Ans. C

100. During prolong surgery of 8 hours the temperature of patient is monitored by:

A- Probe in Axilla
B- Probe in Rectum
C- Probe in Esophagus
D- Probe in Tympanic membrane
E- By Hamstring muscle

Ans: C

Explanation:

- Probe in distal esophagous is easy and reliable method specially in children.
- Probe in tympanic membrane also good method but it is invasive can perforate tympanic membrane and may give initial false reading.
- Pulmonary artery catheter with distal tip thermistor is invasive and gold standard method for measuring core body temperature.

101. Biological activity of immunoglobulins is due to:

A. Fab portion
B. Fc portion
C. Complement

Ans. A (Fab = Biological)

102. For MRSA culture, sample is taken from:

A. Anterior nares
B. Vagina
C. Rectum
D. Skin

Ans. A

103. Patient came in ER with chest pain ECG normal cardiac enzymes normal doctor advised thoracic cage X-RAY which one of these structures is cartilaginous+ Amphiarthrosis joint?

A- Manubrioosternal
B- Costochondral
C- Xiphisternal
D- Sternocostal

Ans: B

104. Which type of fluid is present in acute inflammation?

A. Exudate
B. Transudate
C. Lymph

Ans. A

105. For pericardial effusion, which is the best site for drainage of fluid?

A. Infrasternal with direction superiorly
B. Left 5 and 6 costal spaces just lateral to sternum
C. 2nd ICS left to sternum
D. 4th ICS right to sternum

Ans. A

106. Which is the mediator of Rh incompatibility?

A. IgG
B. IgM
C. Rh antigen
D. IgA

Ans. A

107. In congenital adrenal hyperplasia which enzyme is deficient?

a) 17 alpha hydroxylase
b) 21 alpha hydroxylases
c) 11 beta hydroxylase
d) 5 alpha reductases

Ans. B

108. A child presented with red hot tender knee joint. A diagnosis of septic arthritis was made. Which organism is responsible?

a) Staph aureus
b) Strep pneumonia
c) H. influenza
d) Pseudomonas

Ans. A

109. In glucocerebrosidosis which organelle is defective?
A. Mitochondria
B. Golgi apparatus
C. Lysosomes
D. Centrioles

Ans. C

110. Which enzyme is responsible for conjugation in liver?
A. AST
B. ALT
C. ALP
D. GGT
E. Glucoronyl transferase

Ans. D

111. Electrical stimulation of posterior hypothalamus results in:
A. Shivering
B. Peripheral vasodilatation
C. Goosebumps
D. Sweating

Ans. A

112. In Alzheimer disease brain shows:
A. Hypoplasia
B. Atrophy
C. Hyperplasia
D. Hypertrophy

Ans. B

113. Which one has strongest pre potential?
A. Purkinje fibres
B. SA node
C. AV node
D. Bundle of His

Ans. B

114. Main content of lipids is:
A. Phosphate
B. Glycerol
C. Carbon
D. Nitrogen

Ans. C

115. Mother gave history that her child has sore throat 2 weeks back, now the child has dark coloured urine. Which test is used to confirm diagnosis?
A. ASO titre
B. Blood culture
C. Throat swab culture
D. CBC

Ans. C

116. A patient presented with fever and rigors and chills. On microscopy crescent and ring-shaped organism found.
A. P Malarie
B. P falciparum
C. P vivax
D. P ovale
E. P knowelsi

Ans. B

117. Transfusion reaction will occur by the transfusion of which blood group in a person having A+ve blood group?
A. A-ve
B. AB-ve
C. Ans. B

118. Late effect of ionizing radiations is:
A. Leukaemia
B. Desquamation
C. Endarteritis obliterans
D. Ulcers

Ans. A

119. A patient having radiation therapy which leads to desquamation of oral and buccal mucosa
A. Ulcer
B. Mucositis

Ans. B

120. Chronic intravascular hemolysis is characterized by:
A- Hemoglobenemia
B- Hemoglobinuria
C- Low haptoglobin
D- Hemosiderinuria
E- Unconjugated bilirubin

Ans: D

Explanation:
- Acute intravascular hemolysis – Decrease hepatoglobin > reticulocytosis
- Chronic intravascular hemolysis – Hemosidrinuria > Hemoglobinuria

121. Paraneoplastic syndrome is associated with:
A. Small cell carcinoma
B. Squamous cell carcinoma
C. Adenocarcinoma

D. Large cell carcinoma

Ans. A

122. Which one in characteristic of lead poisoning?

A. Basophilic stippling
B. Round RBCs

Ans. A

123. On USG, there is snow storm appearance with no fetal parts. What is the diagnosis?

A. Partial mole
B. Choriocarcinoma
C. Complete mole
D. Ectopic pregnancy

Ans. C

124. A child presented with arthralgias, abdominal pain and palpable rash over the buttocks and legs. What is the diagnosis?

A. PAN
B. HSP
C. Wegner granulomatosis
D. Dengue fever

Ans. B

125. A child presented with anemia, hypoplastic thumbs and DEB test positive. What is the diagnosis?

A. Diamond black fan anaemia
B. Orotic aciduria
C. Fanconi syndrome
D. Potter sequence

Ans. C

126. Growth hormone maximum secretion occurs during:

a) REM Sleep
b) Non REM Sleep
c) Exercise
d) Morning
e) Hypoglycemia

Ans: E

Explanation: Hypoglycemia > Exercise > NREM Sleep **(Guyton + Ganong)**

127. Sample taken during Colposcopy of a patient Loss of polarity, inc cell size, large nucleus in upper 2/3rd of epithelium with basement membrane intact. What is the likely change called?

A. CIS
B. Neoplasia
C. Dysplasia
D. Anaplasia

Ans. A

128. A patient with swollen ankle joint, TLC count = 12000, fever, uric acid = 600ug. What is the diagnosis?

A. Septic arthritis
B. Gout
C. Osteomyelitis
D. Rheumatoid arthritis

Ans. B

129. Sweating causes:

A. Hyponatremia
B. Electrolyte imbalance
C. Inc water intake
D. Dec. water loss

Ans. A

130. Blood brain barrier formed by:

A- Capillary endothelium
B- Basement memb
C- Pericytes
D- Smooth muscles

Ans: A

131. Which adhesion molecule belongs to CAM family responsible for cell to cell adhesion during embryonic development?

A- Nerve cell adhesion
B- Cadherin
C- Integrin
D- Selectin
E- Adhesion cell of subclass of IgG family

Ans: B

Explanation:

The cell adhesion molecule E-cadherin is ultimately necessary for the transition from compacted morula to the formation of the blastocyst to ensure correct establishment of adhesion junctions in the trophectoderm.

132. Ligament injured on hyperextension of neck is which of following?

A- Ligament nuche
B- Ligament flavum
C- Anterior longitudinal ligament
D- Posterior longitudinal ligament
E- Vertebral ligament

Ans: C

Explanation:

- Hyperextension of neck Ligament Injured – Anterior longitudinal ligament

- Hyper flexion of neck Ligament Injured – Ligament nuche

133. A girl in the library holds 3 books, she tries to hold 4th book but suddenly all of the books fell down:
A. Stretch reflex
B. Inverse stretch reflex
C. Withdrawal reflex
D. Extensor reflex
Ans. B

134. A pregnant delivered a baby at home in a remote village, presented with bleeding gums, peripheral smear shows burr cells, BT, PT, APTT deranged. What is the cause?
A. DIC
B. Haemophilia
C. Won villi Brand disease
D. Antiphospholipid syndrome
Ans. A

135. A child presents with otitis media, sample of pus taken which is greenish which organism is responsible for this?
A. Klebsiella
B. Strep pneumoniae
C. Pseudomonas
D. H influenza
Ans. C

136. Neuroendocrine response involves which part?
A- Thalamus
B- Hypothalamus
C- Spinal cord
D- Temporal lobe
Ans: B

137. Difference between spleen and lymph node is:
A- Afferent lymphitics
B- Splenic sinusoids
C- Efferent
D- Splenic Nodes
E- Arteriole
Ans: B

138. A patient presented with projectile vomiting, pain in abdomen, visible peristalsis. What is the diagnosis?
A. Stomach CA
B. Intestinal obstruction
C. Pyloric stenosis
D. Intussusception
Ans. C

139. Osmotic pressure depends upon:
A. No of solute particles
B. Molecular weight of solute particles
Ans. A

140. Most important function of HCG:
A. Maintains corpus luteum
B. Maintains endometrial thickness
C. Glandular proliferation
D. Ducts and alveolar development
Ans. A

141. Clara cells are present in:
A. Terminal bronchioles
B. Respiratory bronchioles
C. Alveoli
D. Trachea
Ans. A

142. Basal bodies derived from:
A. Mitochondria
B. Centrioles
C. Flagella
D. Cilia
Ans. B

143. A biopsy specimen shows necrosis with outlines of cells preserved. Which process was going on in the specimen?
A. Liquefactive necrosis
B. Coagulative necrosis
C. Wet gangrene
D. Granulomatous necrosis
Ans. B

144. Strenuous exercise causes:
A. Dec. TPR
B. Dec. cardiac output
C. Inc. peripheral resistance
D. Shivering
Ans. A

145. Increased N/C ratio, pleomorphism and loss of polarity, it shows
A. Metaplasia
B. Dysplasia
C. Anaplasia
D. Hyperplasia
E. CIS
Ans. B

146. An old patient present with hypotension, unconsciousness and shock. Patient also has UTI. What is the likely cause of shock?
A. Neurogenic shock

B. Anaphylactic shock
C. Septic shock
D. Cardiogenic shock

Ans. C

147. A population is divided into Subgroups and then random people were taken from each subgroup. Which type of sampling is this?

A. Simple random sampling
B. Stratified random sampling
C. Systemic sampling
D. Cluster sampling

Ans. B

148. Which causes inhibition of osmoreceptors?

A. Hyponatremia
B. Dehydration

Ans. A

Remember: Inc. plasma osmolarity causes = stimulation of osmorecptors and release of ADH

149. Therapeutic window shows:

A. Safety index
B. Adverse effects
C. Clinical effects
D. Dose ranges

Ans. D

Explanation:

- Therapeutic Dose – Potency
- Therapeutic Index – Safety
- Therapeutic Window – Range of Dose
- Therapeutic Effectiveness – Efficacy

150. Insoluble iron is stored as:

A. Ferritin
B. Hemosiderin
C. Haemoglobin
D. Melanin

Ans. B

Remember:

Soluble form of Stored Iron → Ferritin
Insoluble form of Stored Iron → Hemosiderin
Main Intracellular Iron Storage → Ferritin
Parenchymal Iron Storage in Normal Healthy Individual → Ferritin
Parenchymal Iron Storage in excess in Iron Overload → Hemosiderin
Circulatory form (in Plasma) of Stored Iron → Ferritin

151. A patient presented with left lateral ventricular infarct. What is the cause?

Ans. Thrombotic occlusion of LCX

152. A patient presented with fever, weight loss and lymphadenopathy. CD15 and 30 positives. What is the diagnosis?

A. ALL
B. AML
C. Hodgkin lymphoma
D. Myelofibrosis

Ans. C

153. A 65-year-old patient presented with yellowishness of sclera. Labs shows increased reticulocytes count and raised bilirubin. Which test can be used for diagnosis?

A. Bone marrow biopsy
B. Coombs test
C. Hb electrophoresis
D. Serum ferritin

Ans. B

154. A lady bedridden after surgery developed swelling and pain in leg. Doppler shows thrombus in leg vein. What is the cause?

A. Prolonged immobilization
B. Cancer
C. OCPs
D. Hereditary thrombophilia

Ans. A

155. Except for sweat glands, parasympathetic activation causes:

A. Dec secretion
B. Inc secretion
C. Dec peristalsis
D. Bronchodilatation

Ans. B

156. A patient presented with weight loss, tachycardia, increase sweating and exophthalmos. What should be tested in serology?

A. Thyroid stimulating immunoglobulins
B. Anti-gliadin antibody
C. Anti-mitochondrial antibody
D. Anti-peroxidase antibody

Ans. A

157. Most common cause of iodine deficiency goiter is:

A. Dec. oral intake
B. Antibodies against thyroid hormone synthesis enzymes
C. Dec. iodine metabolism by the enzymes

Ans. A

If asked:

Q. Most common cause of congenital hypothyroidism:

A. Antibody from mother
B. Fetal thyroid hormone enzyme deficiency
C. Thyroid dysgenesis
D. Maternal iodine deficiency

Ans. C

158. Most lethal virus after liver transplant is:

A. Hep. B
B. Hep. C
C. CMV
D. Polyoma

Ans. C

159. What is the definition of reliability?

A- Extent to which it gives false result
B- Extent to which a procedure can give repeated results
C- Extent to which a procedure is still good as it started
D- Means reproducibility

Ans: B

160. A patient presented with weight gain and hoarseness of voice with cold intolerance. Anti-thyroid peroxidase antibody positive. What is the diagnosis?

A. Graves' disease
B. Hashimoto's thyroiditis
C. Reidell's thyroiditis
D. De Quervain thyroiditis

Ans. B

161. A patient presented with headache, high BP, increase serum Na+, dec serum K+. What is the diagnosis?

A. Addisons disease
B. Hyperaldosteronism
C. Pheochromocytoma

Ans. B

162. A patient presented with Achillies tendon nodules and corneal arcus. What is the cause?

A. LDL receptor defect
B. Increased LDL production
C. Cholesterol hydrolase defect
D. HDL receptor defect

Ans. A

163. In HbF, beta chain is replaced by:

A. Gamma
B. Delta
C. Alpha
D. Sigma

Ans. A

164. In won villi brand disease which one is correct?

A. Low platelet count
B. Increased Aptt
C. Increased PT
D. Platelet function defect

Ans. B

165. A 28-year-old soldier after returning from siachen glacier, having spent 6 months there, presents to CMH Rawalpindi, with complains of headache and peripheral cyanosis of his fingers. Most probably the cause is:

A- Secondary Polycythemia
B- Polycythemia Vera
C- Sickle Cell anemia
D- Physiologic Polycythemia
E- Anemia

Ans: A

Explanation:

- Within 24hr Symtoms – Pulmonary edema.
- After 5-6 months Symptoms on returning – Secondary polycythemia

166. GFAP positive cells are:

A. Astrocytes
B. Oligodendrocytes
C. Schwan cells
D. Glial cells

Ans. A

167. What change would be present in the epithelium of lungs of chronic smoker?

A. Squamous metaplasia
B. Columnar metaplasia
C. Hypertrophy of mucous gland
D. Atrophy of glands

Ans. A

168. Patient Having Fever, neck rigidity and Slight SOB. CSF report reveals Increase lymphocytes, Glucose 40 and Proteins 400 what is likely Diagnose:

A- Viral Meningitis
B- Fungal Meningitis
C- TB meningitis
D- Bacterial Meningitis

Ans: C

Explanation:

- Bacterial – Neutrophil + Low glucose
- TB – Lymphocyte + Low Glucose
- Viral – Lymphocyte + Normal Glucose

169. A pregnant lady visited a remote village with her family, she is at risk of developing?

A. Hep. D
B. Hep. E
C. Hep. A
D. Hep. B
E. Hep. C

Ans. B

170. Chromosomes of rapidly dividing cells lacks shortening due to enhanced activity of:

A. Reverse transcriptase
B. Isomerase
C. Telomerase
D. Dehydrogenases
E. Synthetase

Ans. C

171. Characteristic feature of myelofibrosis is:

A. Tear drop cells
B. Increased blast cells
C. Splenomegaly
D. Lymphadenopathy

Ans. A

Characteristic feature of myelofibrosis is
Tear drop cells✓
Prominent feature of myelofibrosis is
Splenomegaly✓

172. A lady presented with rash on whole body, urticaria, wheezing and SOB. What is the likely cause?

A. Systemic anaphylactic reaction
B. Delayed haemolytic reaction
C. TRALI
D. Hypersensitivity reaction type 4

Ans. A

173. A diabetic patient presented with uncontrolled diabetes mellitus. Which test is used to check the status of kidney functions?

A. 24-hour urinary proteins
B. Micro albuminuria
C. Urine dipstick
D. Urine electrophoresis

Ans. B

174. A young patient presented to ER with abdominal pain. His Hb drops to 4mg/dl with small sized Rbcs on peripheral smear. Reticulocyte count >0.1 %. What happened to this patient?

A. Parvovirus B 19 infection
B. Transfusion reaction
C. Cold exposure

Ans. A

175. Autonomic reflexes controlled in:

A. Pituitary
B. Sensory ganglia
C. Hypothalamus
D. Cerebral cortex

Ans. C

176. Broad B band in lipid electrophoresis due to?

A. HDL
B. LDL
C. VLDL
D. Chylomicrons

Ans. B

177. A Pregnant lady delivered a baby with congenital deformities. She gave history of using some medication for her cystic acne during her pregnancy. What was that?

A. Retinoic acid
B. Vit C
C. Tetrahydrofolate
D. Vit. E

Ans. A

178. A young boy presented to OPD. He has no other significant finding except something in his eyes. Most useful test for wilson's disease?

A. Serum copper
B. Serum ceruloplasmin
C. Liver biopsy

Ans. B (Wilson's disease)

If asked diagnostic test for wilson's – Liver biopsy

179. Children with fused cervical vertebrae Short neck low hair line on posterior aspect of neck of baby diagnoses is:

A- Turner
B- Klinefltr
C- Down Syndrome
D- Klippel Feil Syndrome

Ans: D

180. A lady has head injury 2 years back, from that time she had amenorrhea. Labs shows normal range of LH FSH Thyroxine and prolactin. But dec level of estrogen. Pregnancy test is negative. No bleeding with progesterone but priming with estrogen and then giving 3 to 4 times progesterone repeatedly results in bleeding. What is the cause?

A. Hypogonadotropic hypogonadism
B. Hypergonadotropic hypogonadism
C. Premature ovarian failure

Ans. A

181. A patient presented with TMJ damaged. Mouth is unable to close and permanently opened. Which muscle is involved?

A. Masseter
B. Medial pterygoid
C. Lateral pterygoid
D. Temporalis

Ans. B

Remember:

Pt can't speak 'L' i.e open mouth- Lateral pterygoid✓

Pt can't speak 'M' i.e close mouth - Medial pterygoid✓

182. Female with heart disease downward traction of her AV valves cannot be made which structure is damaged?

A- Ventricle muscles
B- Annulus fibrosis
C- Septomarginal band
D- Chorda tendinae
E- Crista terminalis

Ans: D

183. MHC contain:

A. HLA genes
B. APC genes

Ans. A

184. Cells producing fibrous tissue are called as:

A. Fibroblasts
B. Astrocytes
C. Fibrous cells

Ans. A

185. Why iodine is used in gram staining?

Iodine fixes the crystal violet into the cell wall of the bacteria by working as a mordant. A mordant forms a complex that adheres tightly to the cell wall. Gram-positive cells will remain purple because of this adherence to the iodine.

186. Pt. with chest pain what will you ask?

Tell me about the pain

187. Protein filtration glomerulus due to:

a) Lamina rara external
b) Lamina rara densa
c) Lamina rara internal

Ans. A

189. Person with difficulty in swallowing, there was some white growth inside esophagus with psuedohyphae likely reason is:

A- Candidiasis
B- Aspergillosis
C- Histoplasmosis
D- Mucor
E- Rhizopus

Ans: A (FA)

190. Most common fungal infection in HIV positive patient:

A- Histoplasmosis
B- Candida
C- Aspergillus
D- Tuberculosis
E- Mucor

Ans: B

191. Child having sore throat, fever, membrane in buccal cavity. Bleeding on scrapping…Diagnosis?

A: Corynebacterium diphtheria
B: Tonsillitis
C: Abscess

Ans: A

Explanation:

Diphtheria features:

A thick, gray membrane covering your throat and tonsils.
A sore throat and hoarseness.
Swollen glands (enlarged lymph nodes) in your neck.
Difficulty breathing or rapid breathing.
Nasal discharge.
Fever and chills.

192. Hypertrophic of parathyroid glands is seen in a patient of:

Ans. CRF

193. As compared to normal person, marathon runner has following changes:

A- Increase SV
B- Increase SV and heart rate
C- Decrease heart rate and increase SV
D- Both are decreased
E- Decrease SV
Ans: C

194. A Boy with H/O of pharyngitis having Raised ASO high amount proteinuria mechanism of disease is:
A- Antigen antibody complex in different tissue
B- Antibody in tissue
C- Cells in Tissue
D- IgE mediated damage
Ans: A (PSGN)

195. Substance that decreases in blood due to glucagon?
A. Glucose
B. Amino acid
C. FFA
D. Calcium
Ans. B

196. Effective completion of autoclaving process is indicated by:
Ans. Bowie Dick Strip Test

197. There are A cells +4, B cells +4. O cells +4. Anti A, Anti B and Anti AB are also present. The patient's blood group is?
Ans. Bombay blood group

Blood Group	Forward Group			Reverse Group		
	Anti-A	Anti-B	Anti-A,B	A1 Cells	B Cells	O Cells
A	+	–	+	–	+	–
B	–	+	+	+	–	–
AB	+	+	+	–	–	–
O	–	–	–	+	+	–
Bombay	–	–	–	+	+	+

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